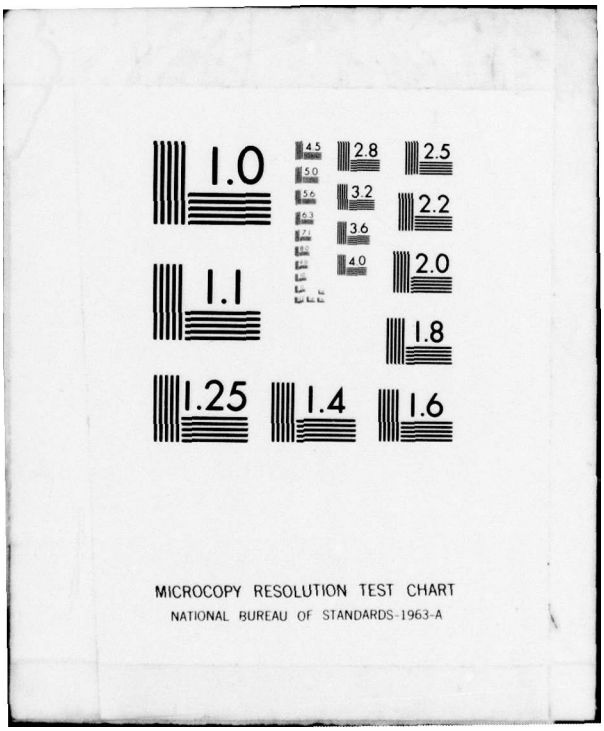
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CH-46 COMPOSITE ROTOR BLADE FLIGHT STRESS SURVEY DATA. VOLUME V--ETC(U)
1978 R AIELLO, J BENDO N00019-75-C-0396
UNCLASSIFIED D210-11168-3-VOL-6 NL

1 OF 4
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VOL-6

(6)

TITLE CH-46 COMPOSITE ROTOR BLADE FLIGHT STRESS SURVEY DATA, PLOTTED FORWARD ROTOR ROTATING AND STATIONARY CONTROLS, Volume VI.

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MODEL CH-46 CONTRACT N00019-75-C-0396 .

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PREPARED BY R.A. J.Bendo R.Aiello/J.Bendo DATE 11/22/78

APPROVED BY K. Lunn DATE 1-26-79

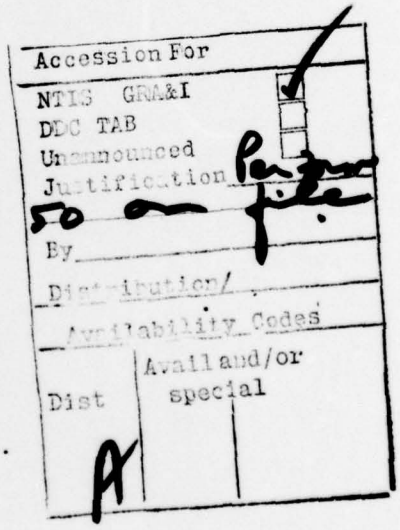
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REVISIONS			
LTR	DESCRIPTION	DATE	APPROVAL

ACTIVE SHEET RECORD

SHEET NUMBER	REV LTR	ADDED SHEETS				SHEET NUMBER	REV LTR	ADDED SHEETS			
		SHEET NUMBER	REV LTR	SHEET NUMBER	REV LTR			SHEET NUMBER	REV LTR	SHEET NUMBER	REV LTR
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2				32				62			
3				33				63			
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5				35				65			
6				36				66			
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8				38				68			
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ACTIVE SHEET RECORD

SHEET NUMBER	REV LTR	ADDED SHEETS				SHEET NUMBER	REV LTR	ADDED SHEETS			
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98				128				158			
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103				133				163			
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106				136				166			
107				137				167			
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115				145				175			
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118				148				178			
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ACTIVE SHEET RECORD

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190				220				250			
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192				222				252			
193				223				253			
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197				227				257			
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ACTIVE SHEET RECORD

SHEET NUMBER	REV LTR	ADDED SHEETS				SHEET NUMBER	REV LTR	ADDED SHEETS			
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272				302				332			
273				303				333			
274				304				334			
275				305				335			
276				306				336			
277				307				337			
278				308				338			
279				309				339			
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FORM 46288 (7/67)

ABSTRACT

This report volume presents plotted forward rotor rotating and stationary control loads measured during the CH-46 Composite Rotor Blade Flight Stress Survey.

KEYWORDS

CH-46E
Composite
Rotor Blade
Flight Stress Survey
Alternating and Steady Loads

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REFERENCES

1. Vertol Report D210-11168-1 "CH-46 Composite Rotor Blade Flight Test Qualification Test Plan" March 30, 1977

2. Vertol Report D210-11168-2 "CH-46 Composite Rotor Blade Flight Test Report" May 15, 1978

3. Boeing Vertol Report D210-11168-3 Volume 1 of 13, CH-46 Composite Rotor Blade Flight Stress Survey Data

4. Boeing Vertol Report D210-11168-3 Volume 11 of 13, CH-46 Composite Rotor Blade Flight Stress Survey Data, Tabulated Forward and Aft Control Loads

1. INTRODUCTION

A flight stress survey was conducted on a CH-46 helicopter with A02R1702 composite rotor blades. The test was conducted in accordance with Paragraphs 4.3.2 and 4.7 of Reference 1. General test description and pilot comments are included in Reference 2.

The tests were conducted at the Boeing Vertol Flight Test Facility at Ridley Township, Pennsylvania, during the period of June 1977 through November 1977.

2. SUMMARY

A flight stress survey and structural demonstration was conducted on the #1 CH-46E Helicopter, BuNo. 153372 (S/N 2268).

The components under test were the A02R1702 composite rotor blades and the A02R1710 blade socket.

This volume contains measured steady and alternating forward rotor rotating and stationary controls loads plotted versus true airspeed. The same data is tabulated in Volume 11.

3. DATA PRESENTATION

This report contains measured steady and alternating forward rotating and stationary controls loads. The data is presented as plots versus true airspeed. The steady and alternating values are plotted separately and appear together as two plots per page for various level flight and maneuver conditions. The load levels shown represent the maximum alternating load cycle occurring during the particular flight condition. This same data is tabulated in Volume 11.

Detailed flight condition parameters and a complete tabulated summary of maneuvers for each flight can be found in Volume 1 of this report.

3.1 Gage Identification and Index

Data plot indexing, strain gage identification and instrumentation code information for data presented in this volume are as follows:

DATA CODE		MEASUREMENT		
ACTIVE	SPARE	NAME	UNITS	DATA PLOT PAGE #
41250	61250	Fwd Pitch Link,Green Blade	(LB)	21
41320	61320	Fwd Pitch Link, Yellow Blade	(LB)	55
41330	61360	Fwd Pitch Link, Red Blade	(LB)	86
41340	41360	Fwd Drive Scissors Arm	(LB)	120
43640	63100	Fwd Static Scissors	(LB)	154
43010	63010	Fwd LH C/P Link	(LB)	188
43020	63020	Fwd RH C/P Link	(LB)	222
43030	63030	Fwd Lateral Link	(LB)	256
43040	63040	Fwd Longitudinal Link	(LB)	290
43050	63050	Fwd Coll/Pitch Yoke	(LB)	324

NOTES:
1. A complete description of the instrumentation for this stress survey can be found in Volume 1.
2. A flight by flight summary of operative gages can be found in Reference 2.
3. The spare gages were utilized when the active gages proved inoperable.

3.2 Sign Convention

The following table summarizes the sign convention adhered to for the gages presented in this volume.

GAGE MEASUREMENT NAME	(+) POLARITY CONDITION
Fwd Pitch Link, Green Blade	Tension
Fwd Pitch Link, Yellow Blade	Tension
Fwd Pitch Link, Red Blade	Tension
Fwd Drive Scissors ARm	Blade Lagging
Fwd Static Scissors	Swashplate CCW
Fwd LH c/p Link	Tension
Fwd RH c/p Link	Compression
Fwd Lateral Link	Tension
Fwd Longitudinal Link	Tension
Fwd Coll/Pitch Yoke	Boost Actuator Extended

3.3 Plot Format

The data plots have been grouped by common flight conditions and maneuvers and are presented in the order outlined by the data plot format table included on the next page.

For identification of data plots the plot code number in the right hand column of the table is printed on each corresponding plot chart.

Please note that many symbols are used more than once.

PLOT FORMAT

GROSS WEIGHT LBS.	C.G. IN.	HD FT.	RPM	CONDITION	PLOT CODE NO.
20800	22.4"Fwd	2000	264	Level Flt.	- 1
		14000		Level Flt.	- 2
		All		Pullups(PWR ON&OFF), P.P.D. Rec.	-11
				Turns (PWR ON&OFF)	-15
				Control Rev.'s (PWR ON)	-19
				Control Rev.'s (PWR OFF), Flares	-23
				P.P.D.'s, Autorotation	-27
	9.7"Aft	2000		Level Flt.	- 3
		6000		Level Flt.	- 4
		14000		Level Flt.	- 5
		6000	248	Level Flt.	-10
		All	264	Pullups(PWR ON&OFF),P.P.D. Rec.	-12
				Turns (PWR ON&OFF)	-16
				Control Rev.'s (PWR ON)	-20
				Control Rev.'s(PWR OFF), Spiral Desc., Flares	-24
				P.P.D.'s Autorotation	-28
24300	13.2"Fwd	2000		Level Flt.	- 6
		8000		Level Flt.	- 7
		All		Pullups(PWR ON&OFF)	-13
				Turns (PWR ON&OFF)	-17
				Control Rev.'s (PWR ON)	-21
				Spiral Descent, Flares	-25
				P.P.D.'s, P.P.D. Rec., Autorotation	-29

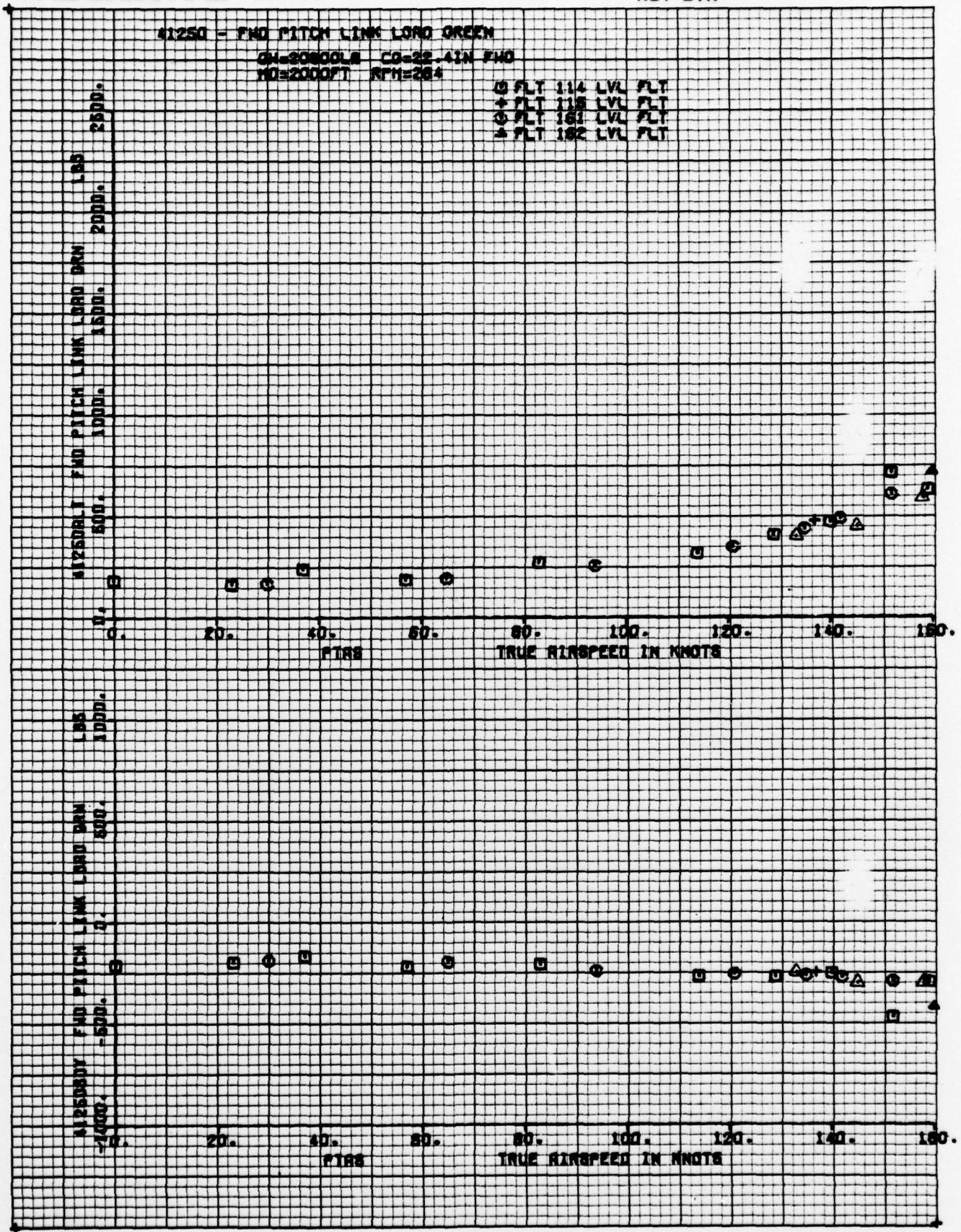
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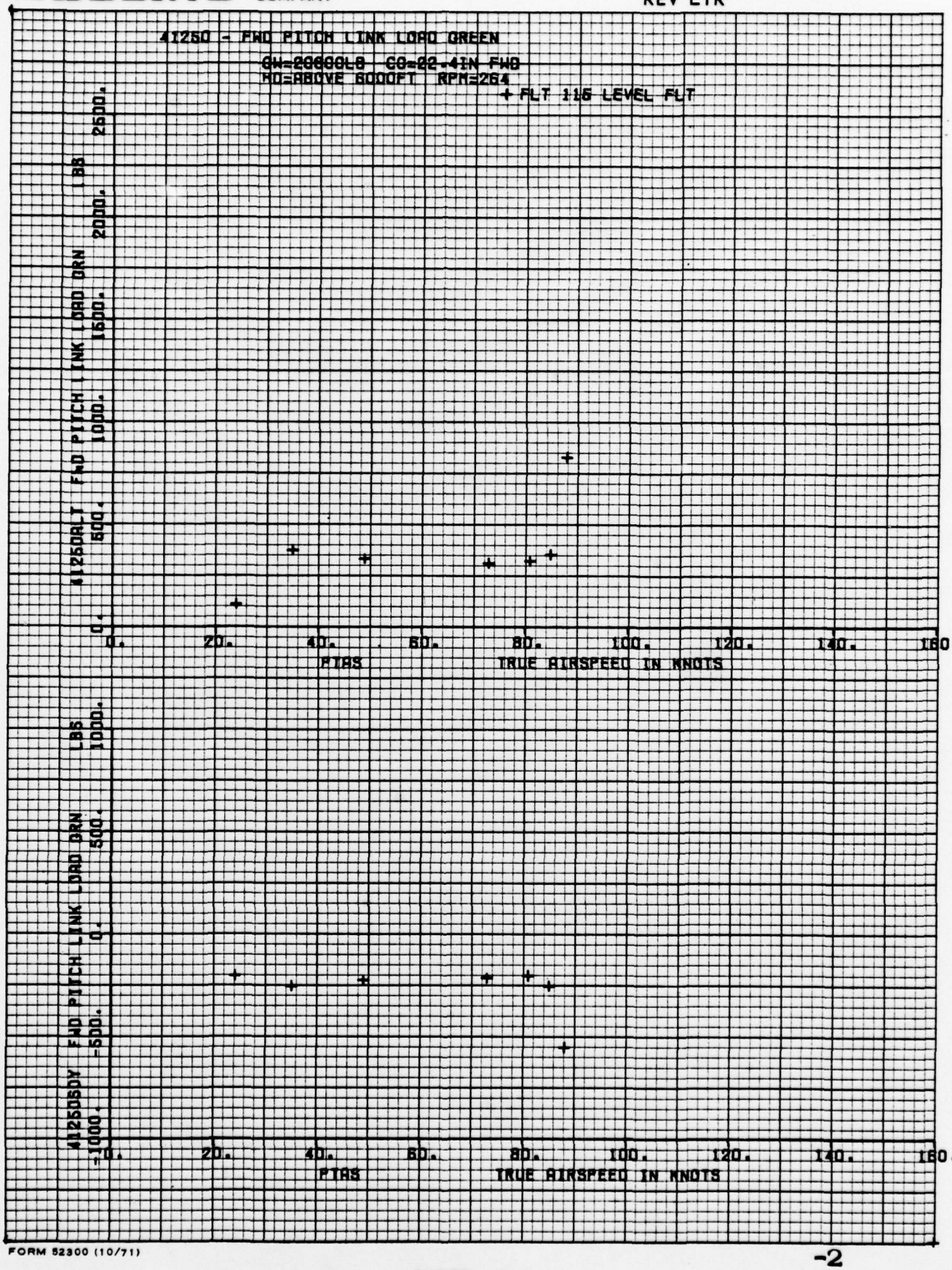
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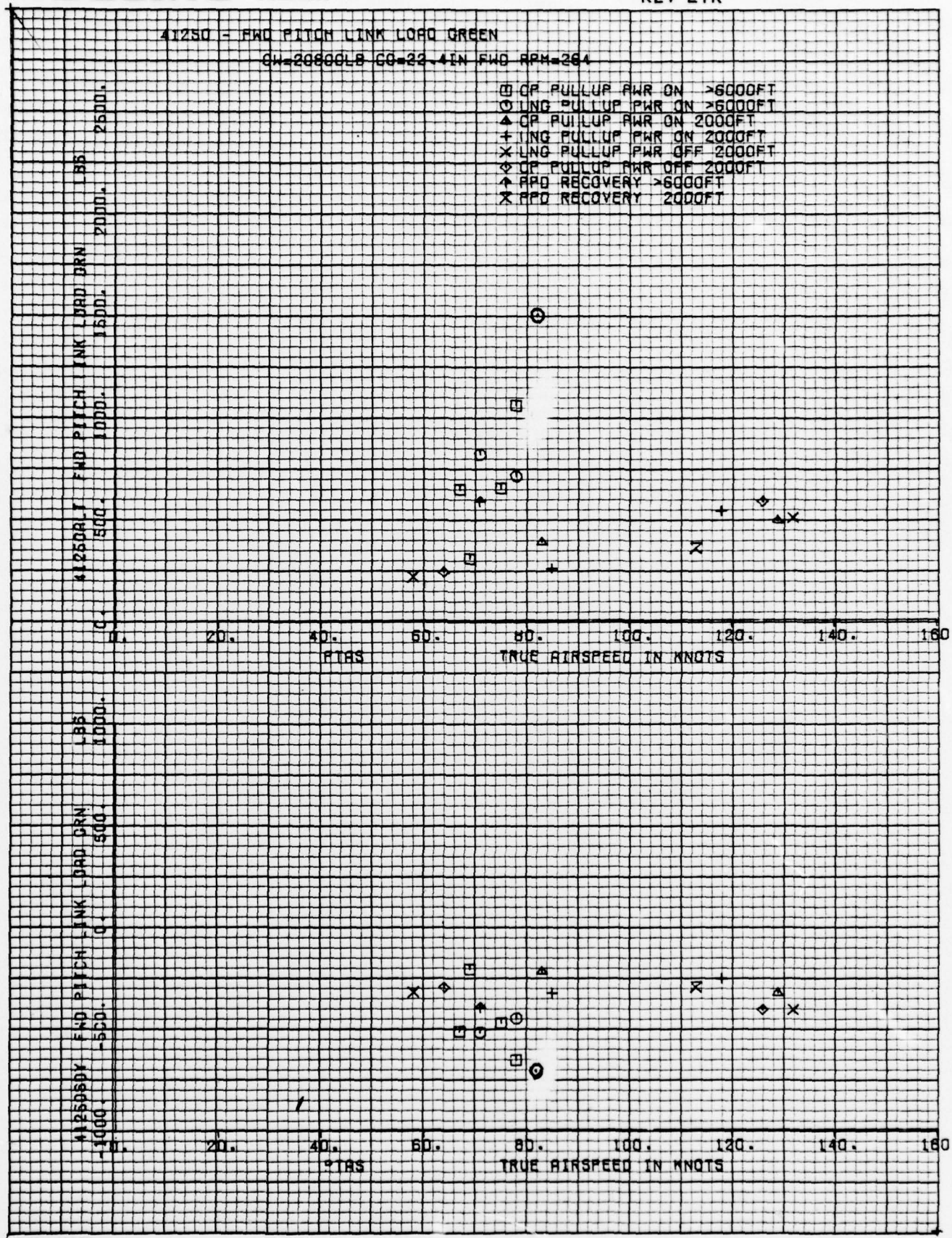
GROSS WEIGHT LBS.	C.G. IN.	HD FT.	RPM	CONDITION	PLOT CODE NO.
24300 ↓	4.4"Fwd ↓	2000	264 ↓	Level Flt.	- 8
		8000		Level Flt.	- 9
		All ↓		Pullups (PWR ON&OFF)	-14
				Turns (PWR ON&OFF)	-18
				Control Rev.'s (PWR ON)	-22
				Spiral Descent, Flares	-26
				P.P.D.'s, Autorotation	-30
	1.5"Aft	2000		Level Flight (External Cargo)	-35

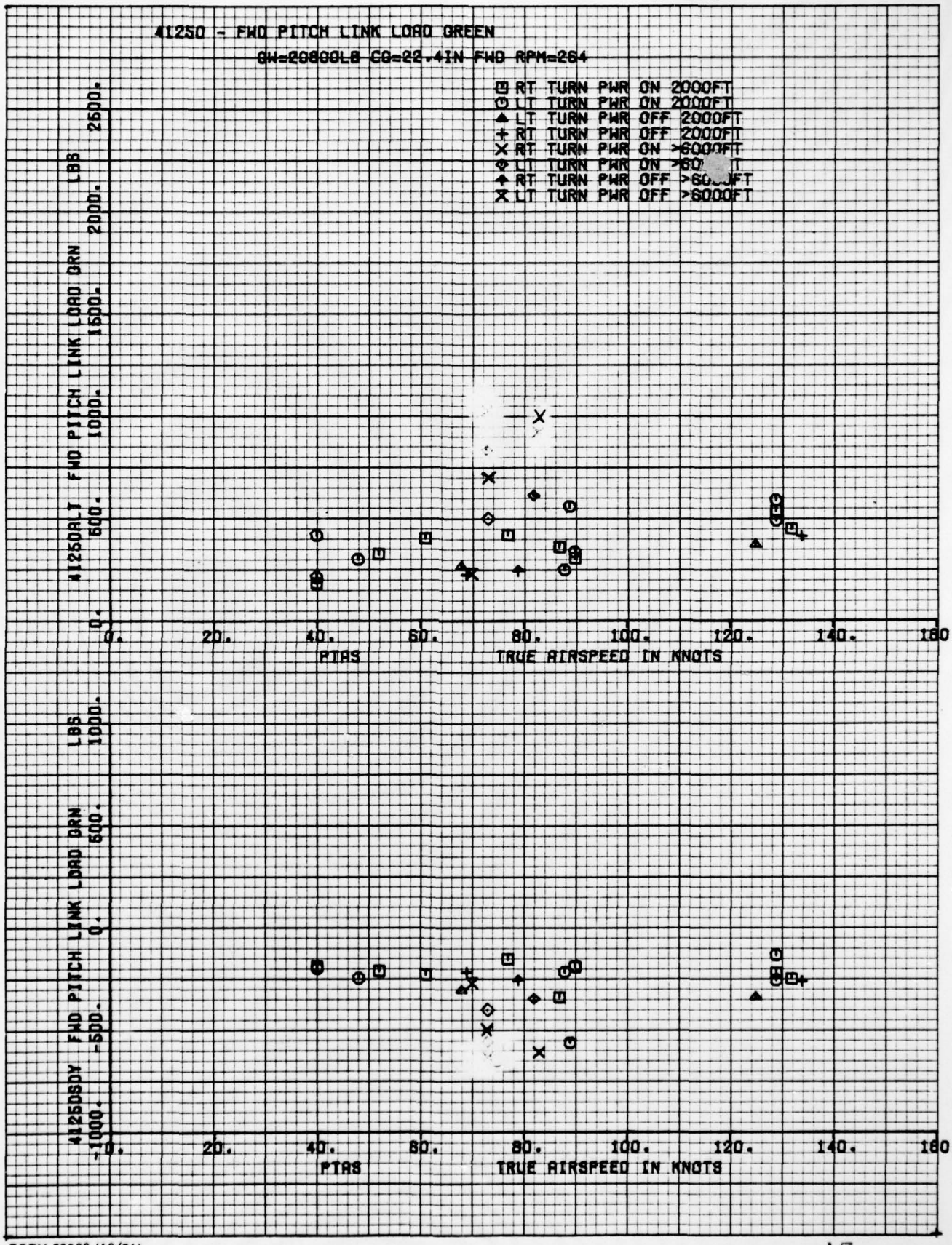
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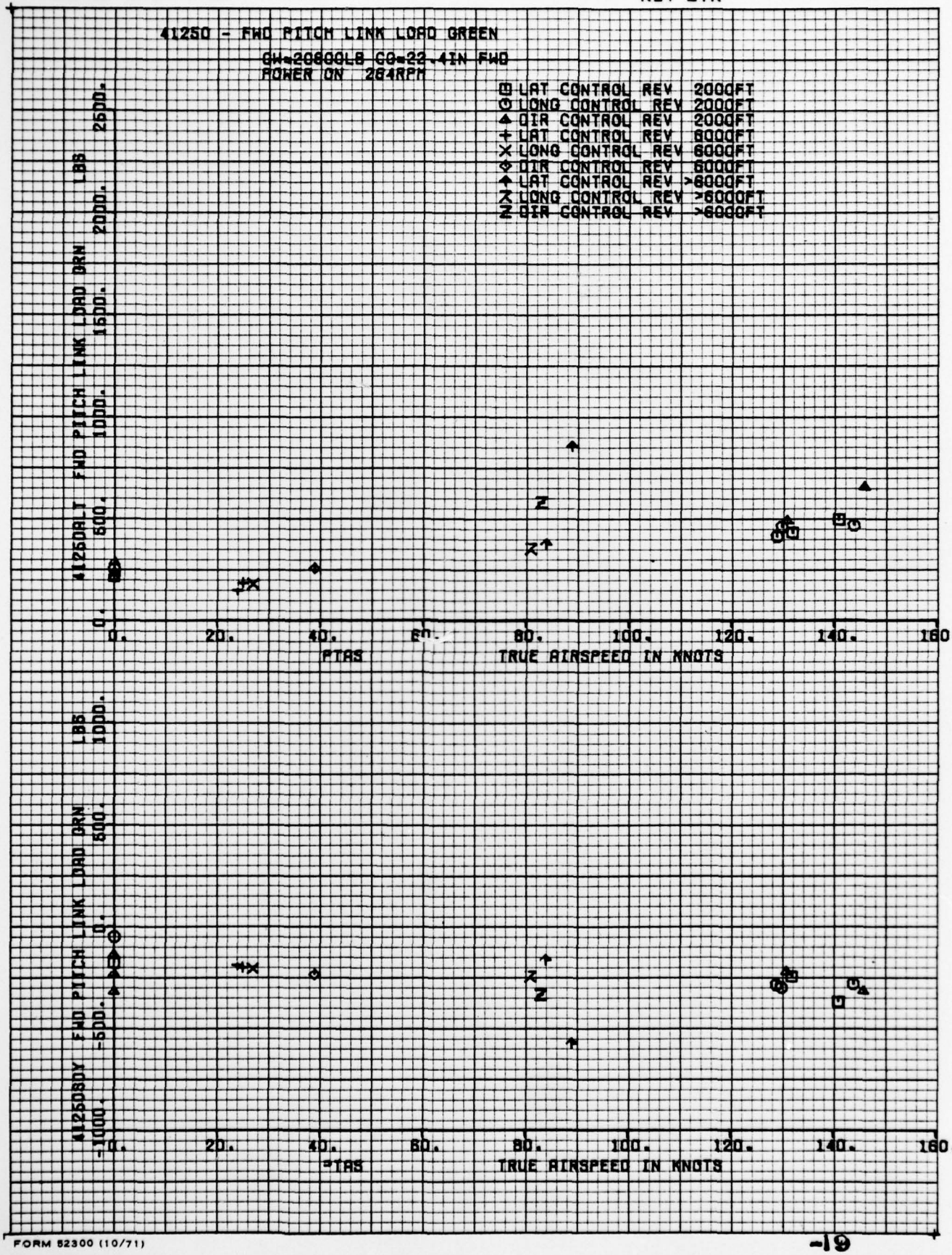
4.1 Forward Pitch Link, Green Blade


#1250 - FWD PITCH LINK LOAD GREEN
GW=20000LB CG=22.4IN FWD
HO=2000FT RPM=264
FLT 114 LVL FLT
FLT 115 LVL FLT
FLT 161 LVL FLT
FLT 162 LVL FLT
#1250ALT FWD PITCH LINK LOAD GRN LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
#1250BDY FWD PITCH LINK LOAD GRN LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

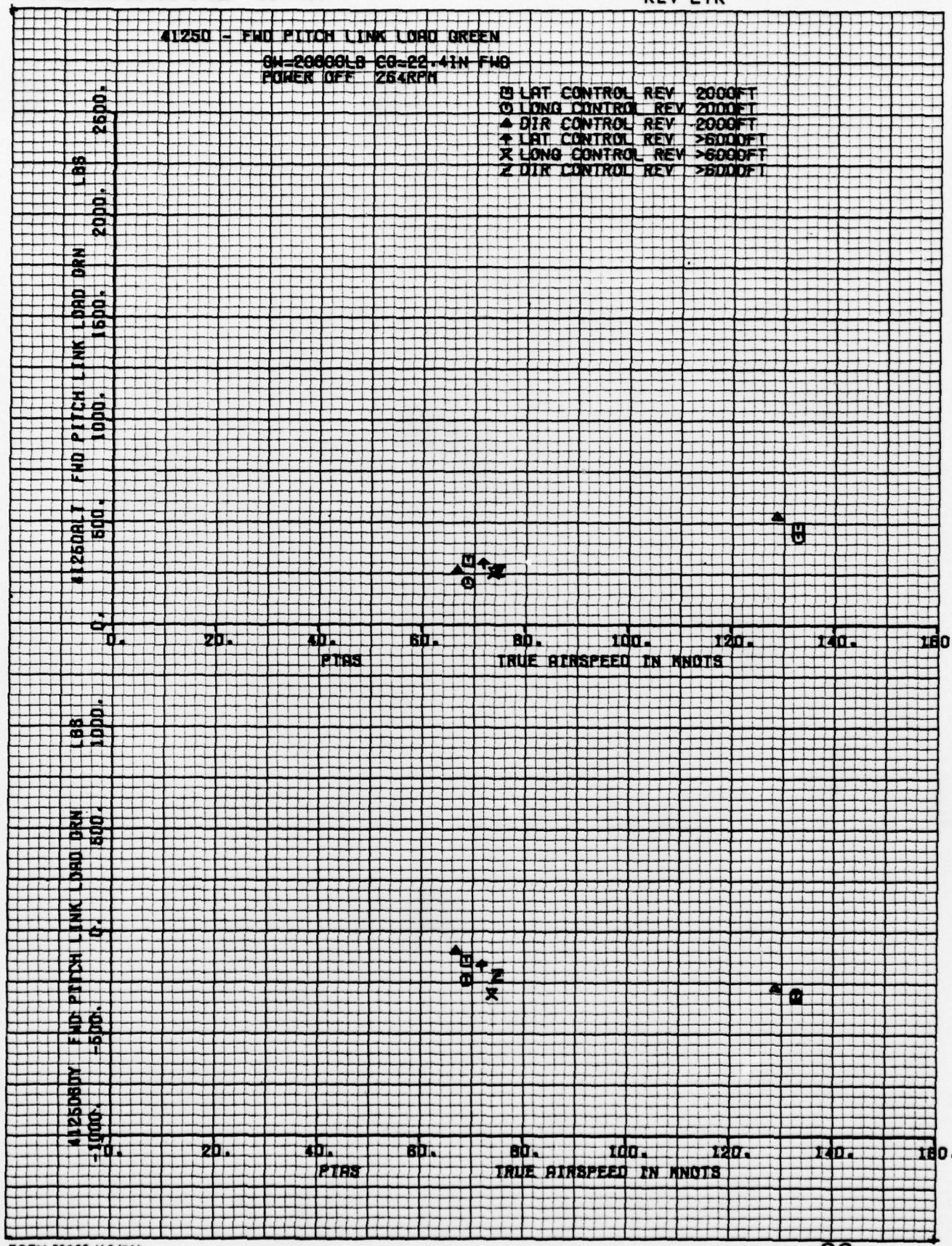

41250 - FWD PITCH LINK LOAD GREEN
GW=20000LB CG=22.41N FWD
HO=ABOVE 6000FT RPM=264
+ FLT 116 LEVEL FLT
41250ALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
41250SDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS


41250 - FWD PITCH LINK LOAD GREEN
GW=20800LB CG=22.4IN FWD RPM=264
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 2000FT
LNG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
RPD RECOVERY >6000FT
RPD RECOVERY 2000FT
41250ALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
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20.
40.
60.
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100.
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KTAS
TRUE AIRSPEED IN KNOTS
41250DBY FWD PITCH LINK LOAD DRN LBS
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KTAS
TRUE AIRSPEED IN KNOTS


41250 - FWD PITCH LINK LOAD GREEN
GW=20800LB CG=22.4IN FWD RPM=264
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >60
RT TURN PWR OFF >60
LT TURN PWR OFF >6000FT
41250ALT FWD PITCH LINK LOAD DRN LBS
2500.
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60.
80.
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TRUE AIRSPEED IN KNOTS
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PTAS
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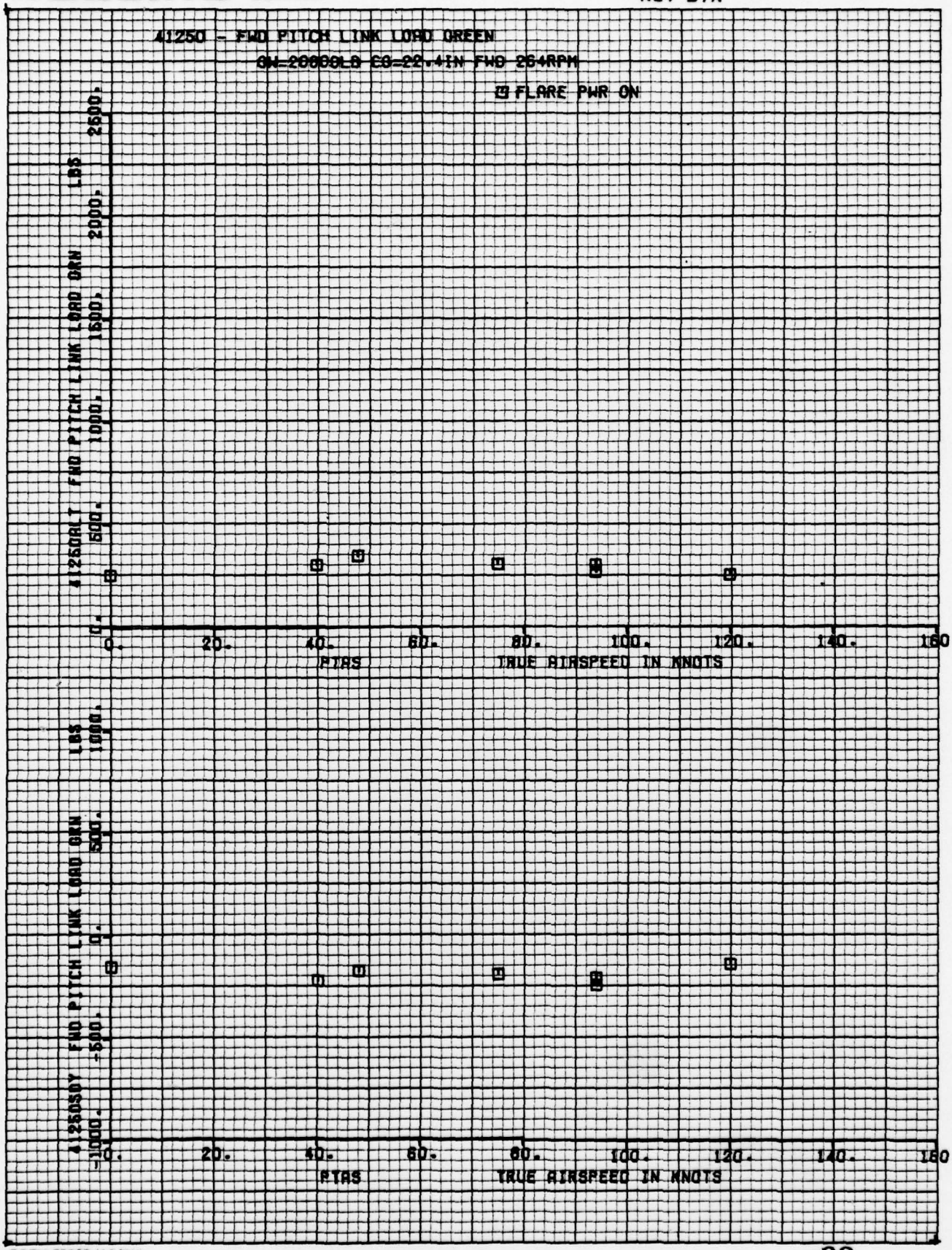


FORM 52300 (10/71)

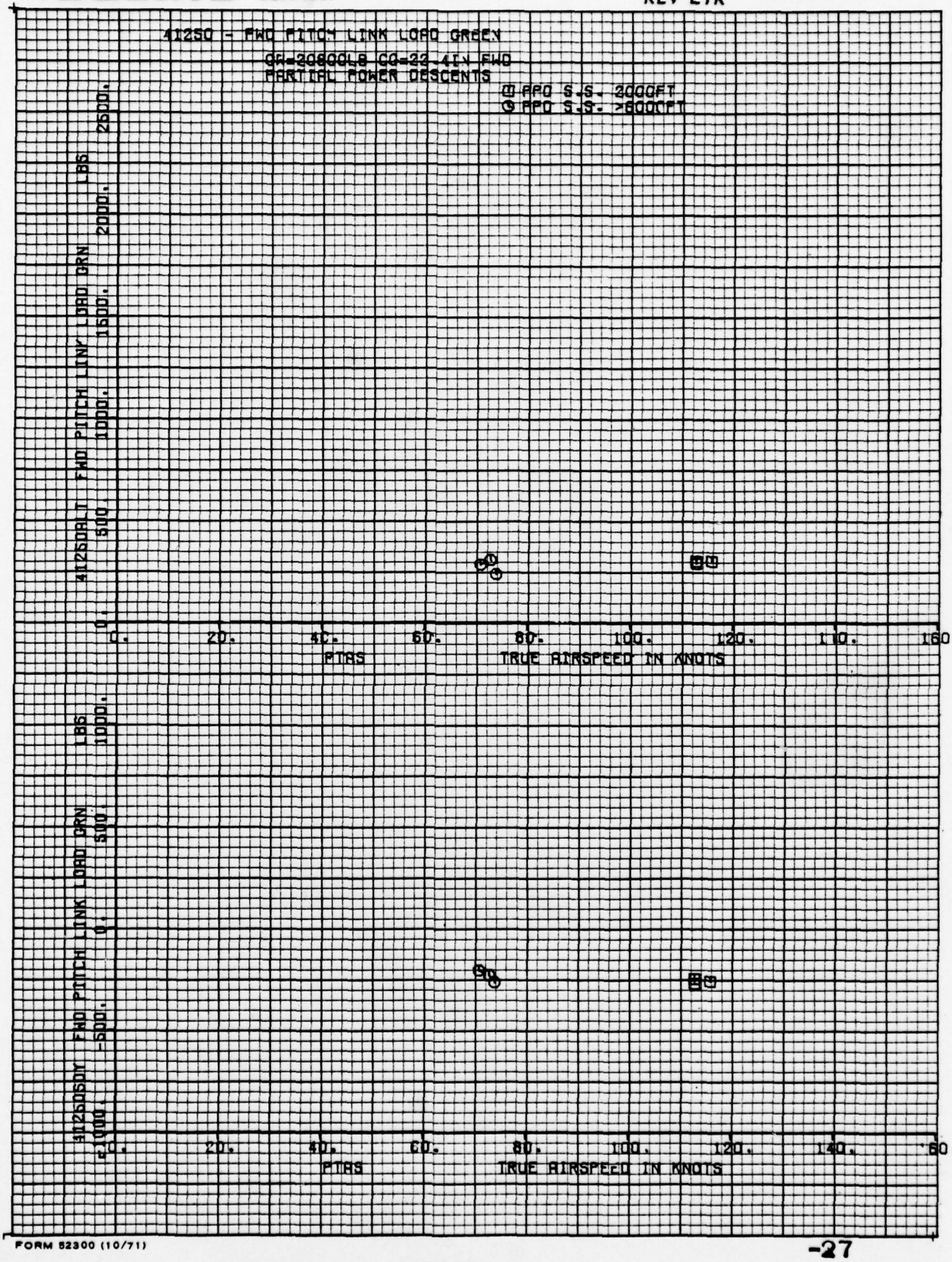


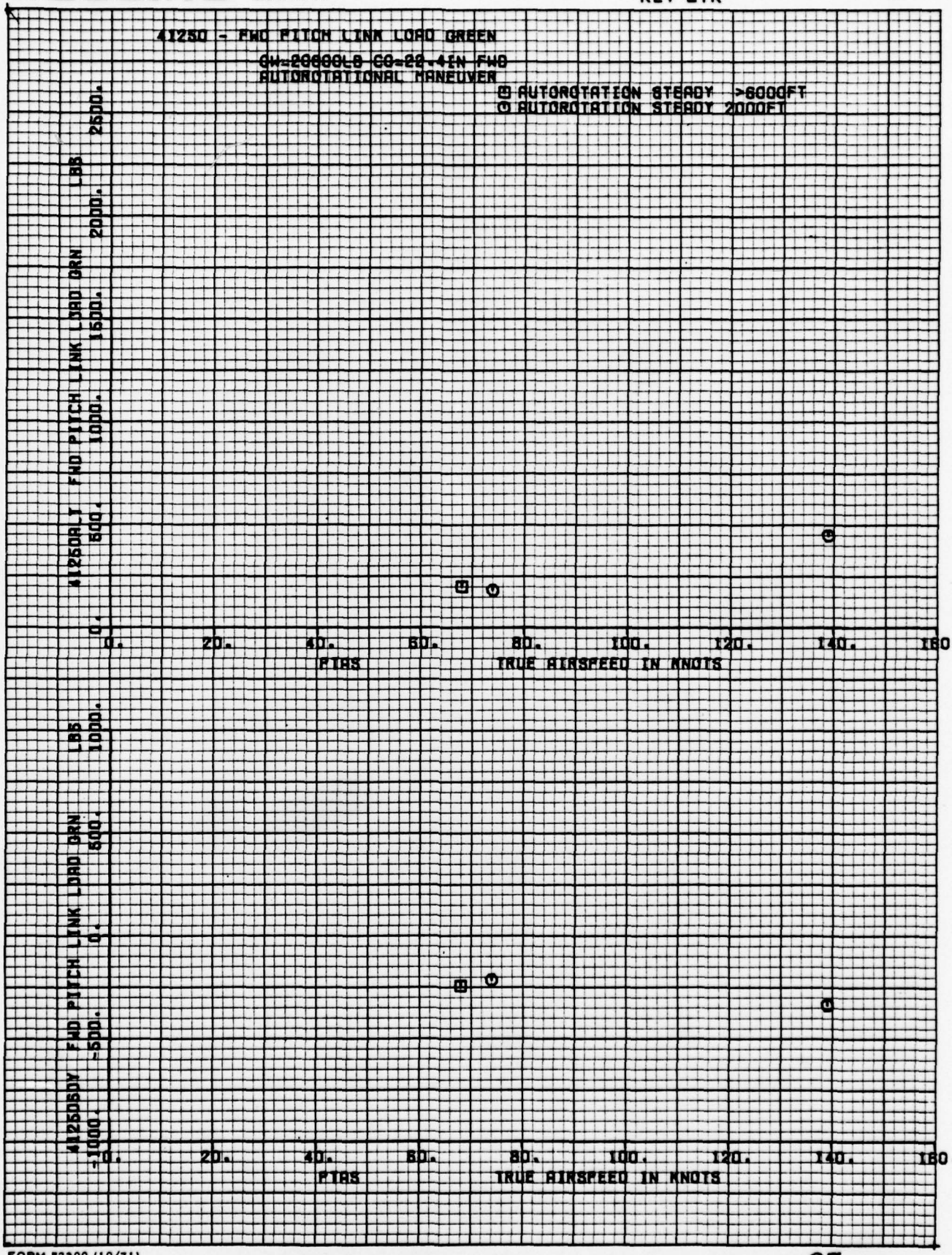
FORM 52300 (10/71)

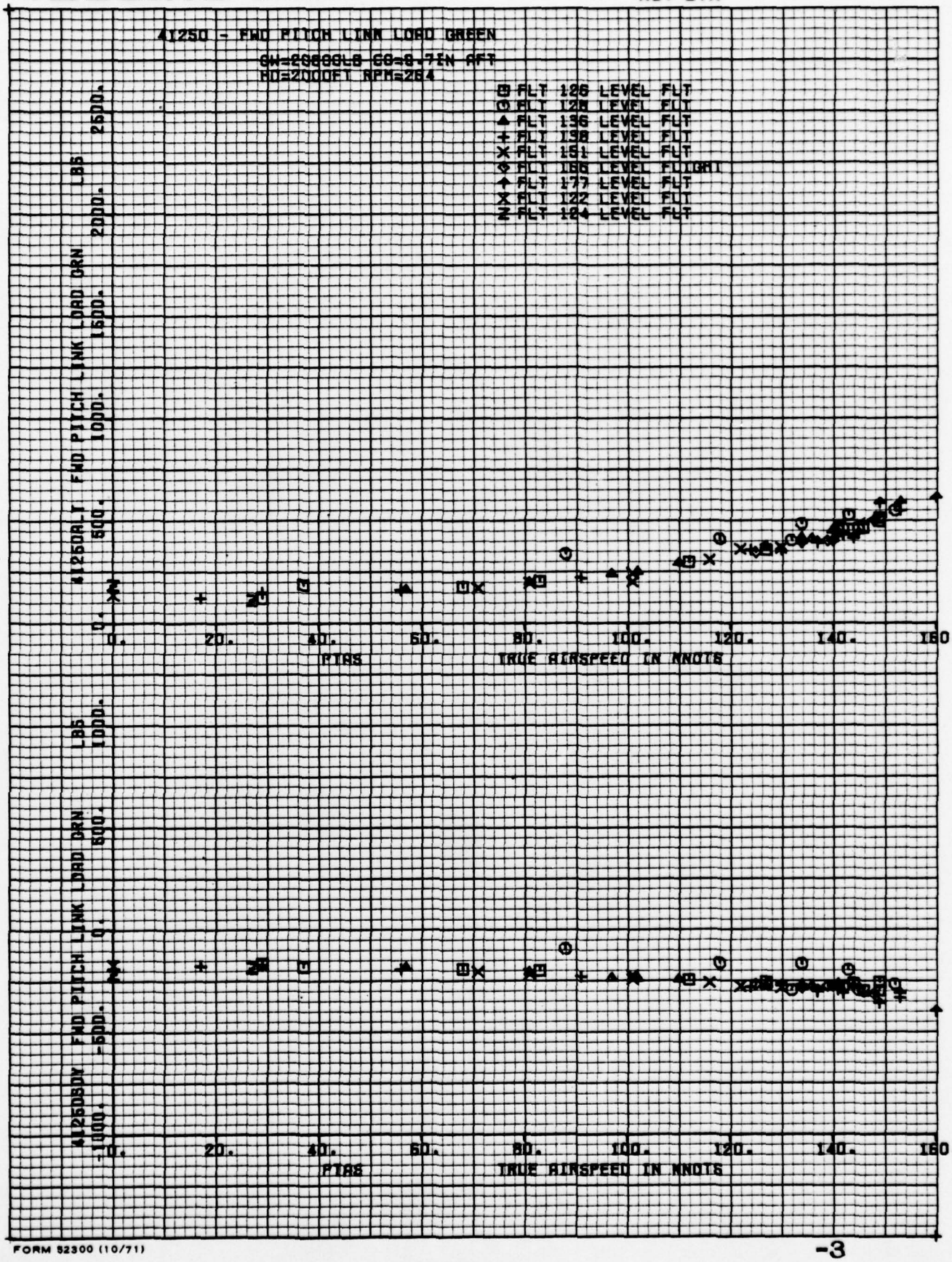
THE BOEING COMPANY

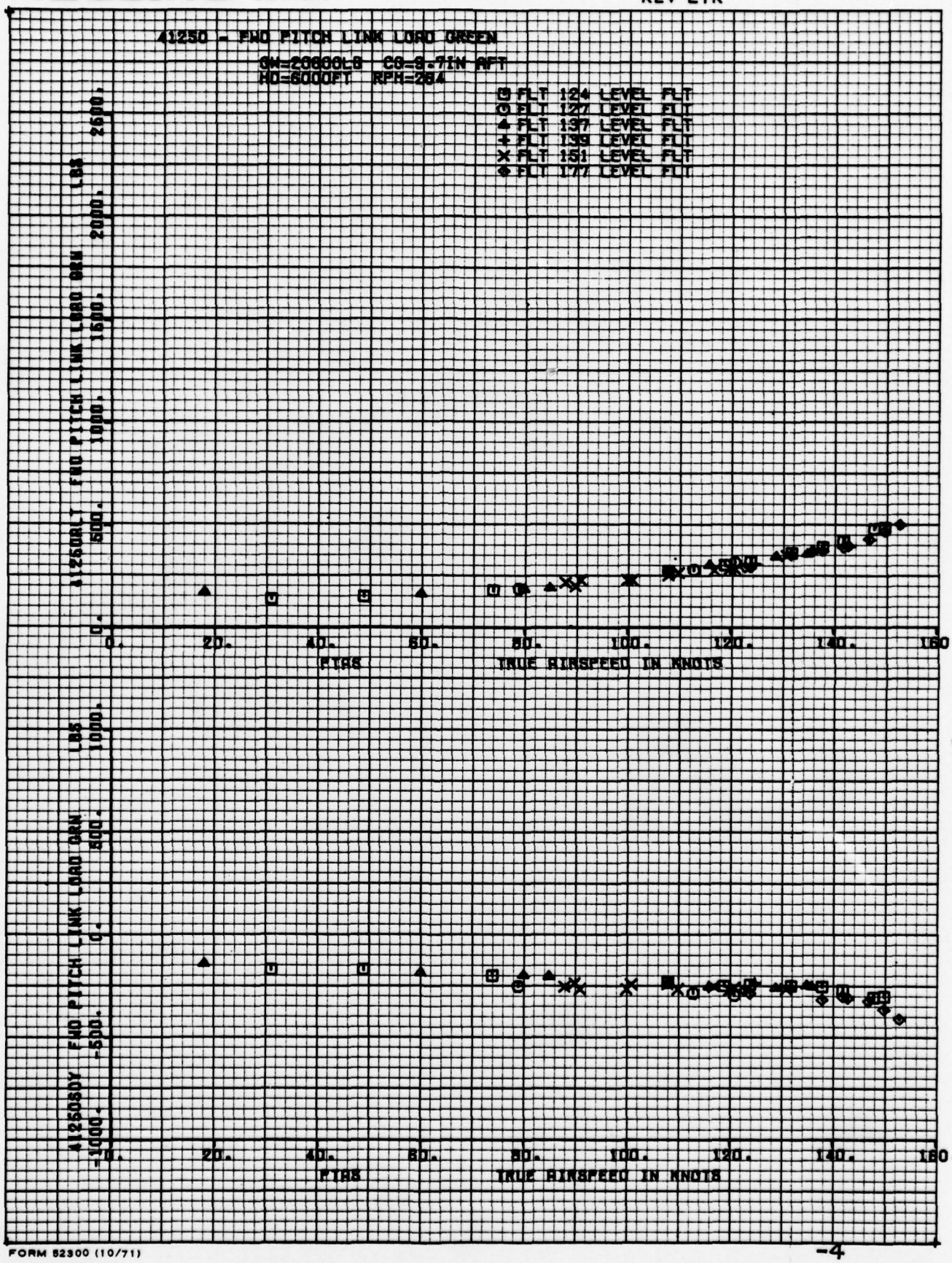


FORM 52300 (10/71)

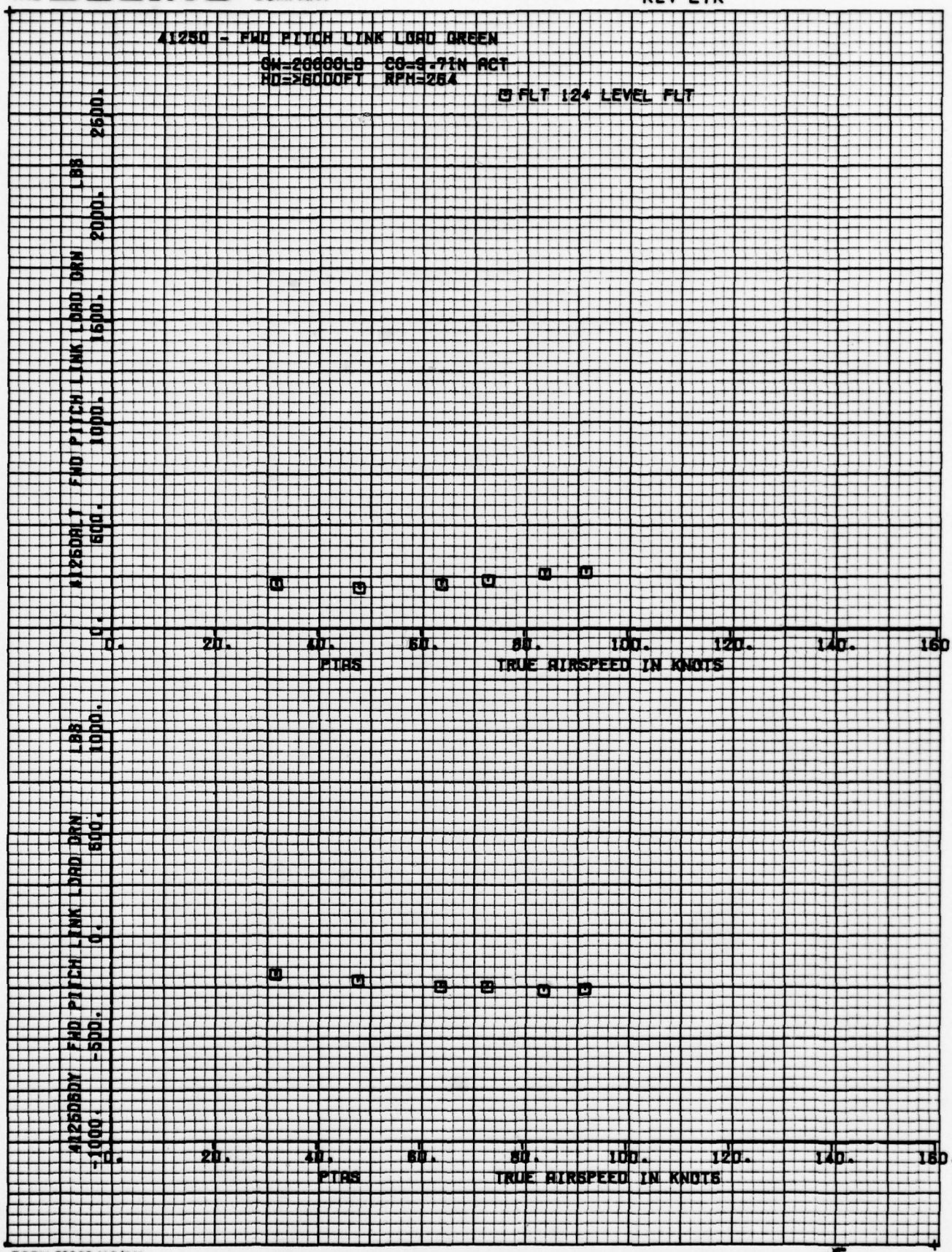

41250 - FWD PITCH LINK LOAD GREEN
GR=206000LB CG=22.4IN FWD
PARTIAL POWER DESCENTS
@ APD S.S. 2000FT
@ APD S.S. >6000FT
41250ALT FWD PITCH LINK LOAD GRN LBS
2600.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS
41250SDY FWD PITCH LINK LOAD GRN LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS


41250 - FWD PITCH LINK LOAD GREEN
GW=20000LB CG=22.4IN FWD
AUTOROTATIONAL MANEUVER
⊟ AUTOROTATION STEADY >6000FT
⊙ AUTOROTATION STEADY 2000FT
41250DLY FWD PITCH LINK LOAD GRN LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41250SDY FWD PITCH LINK LOAD GRN LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

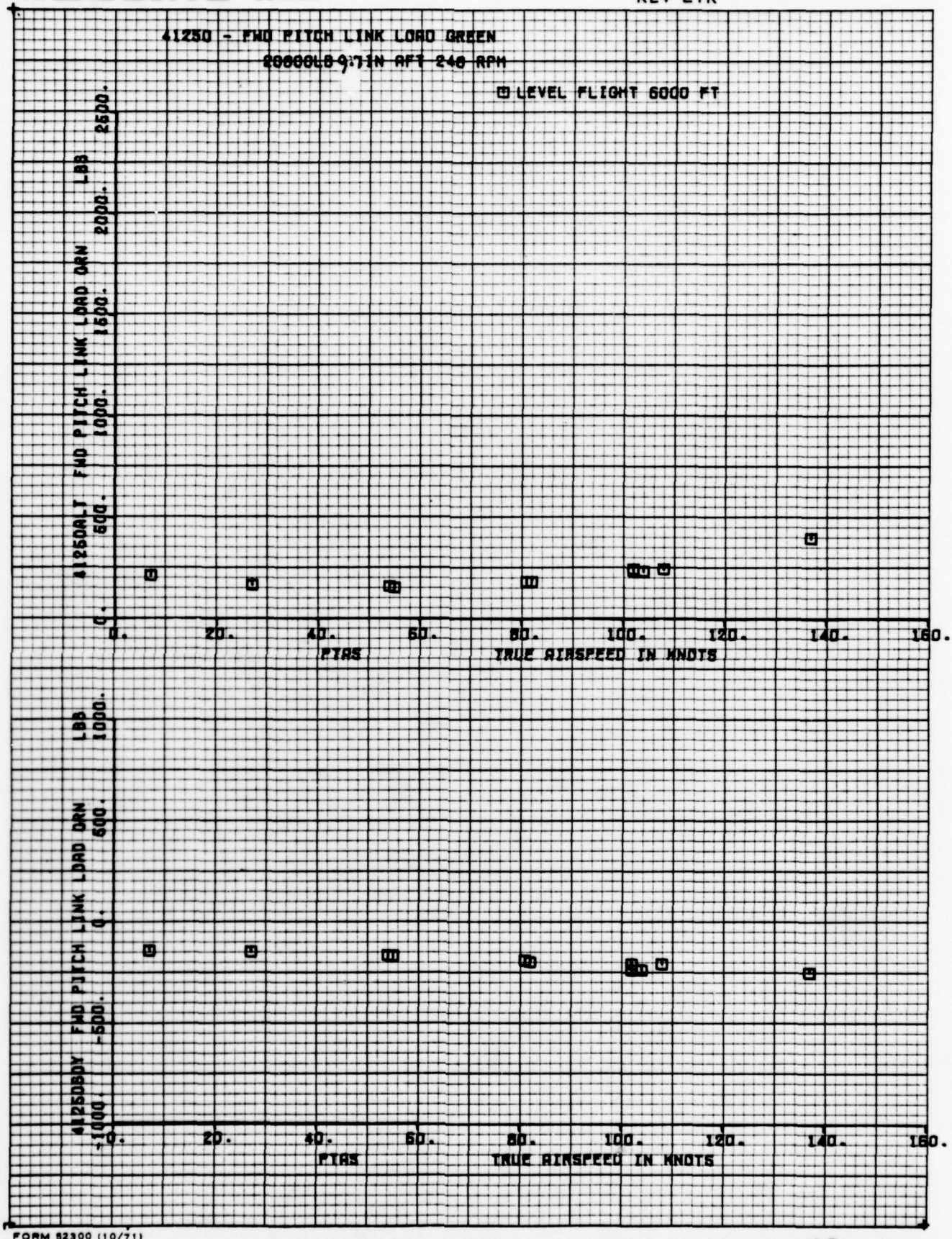

41250 - FWD PITCH LINK LOAD GREEN
GW=20000LB CG=8.7IN AFT
HD=2000FT RPM=264
FLT 126 LEVEL FLT
FLT 128 LEVEL FLT
FLT 136 LEVEL FLT
FLT 138 LEVEL FLT
FLT 151 LEVEL FLT
FLT 166 LEVEL FLIGHT
FLT 177 LEVEL FLT
FLT 122 LEVEL FLT
FLT 124 LEVEL FLT
41250ALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
41250BDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS



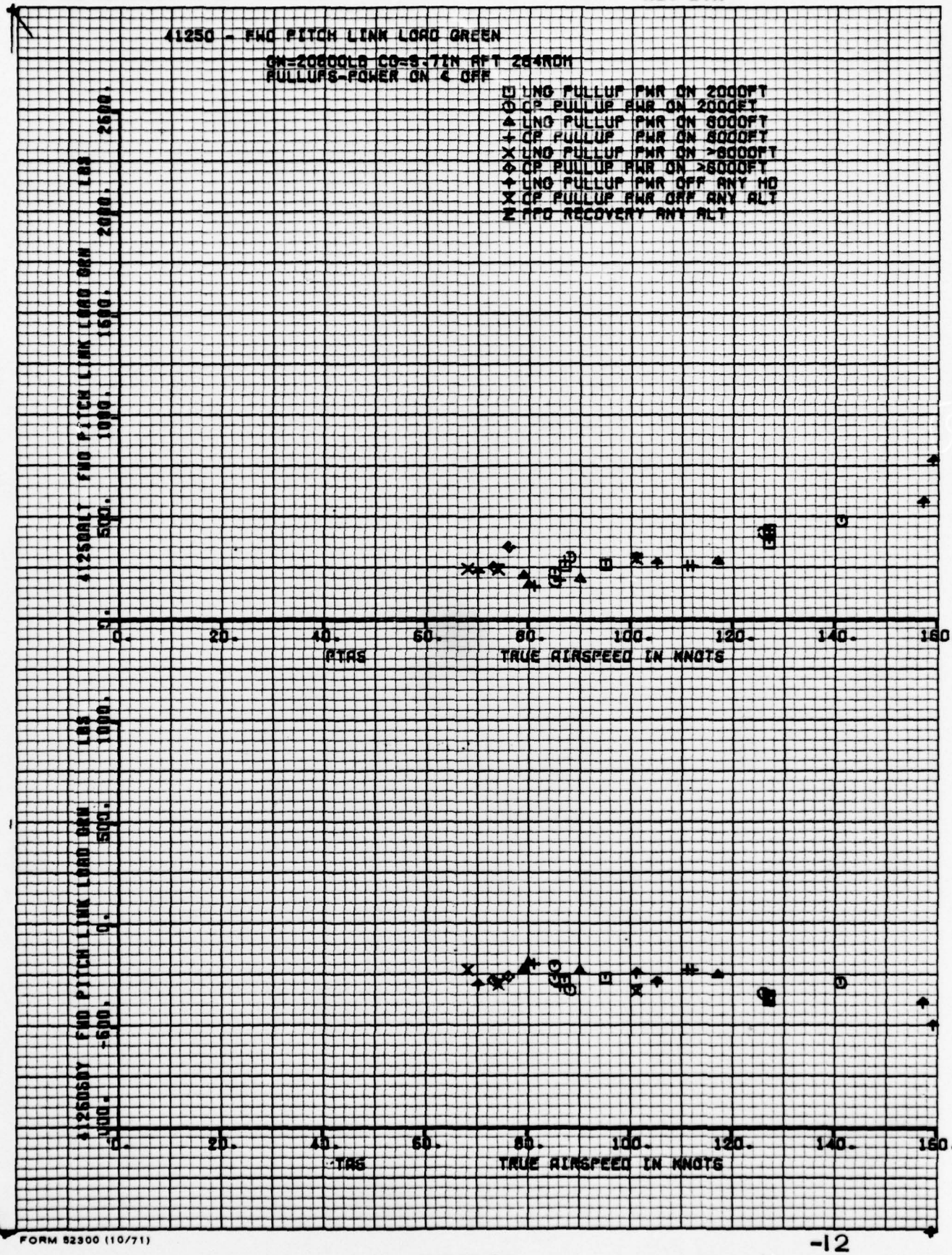
FORM 82300 (10/71)

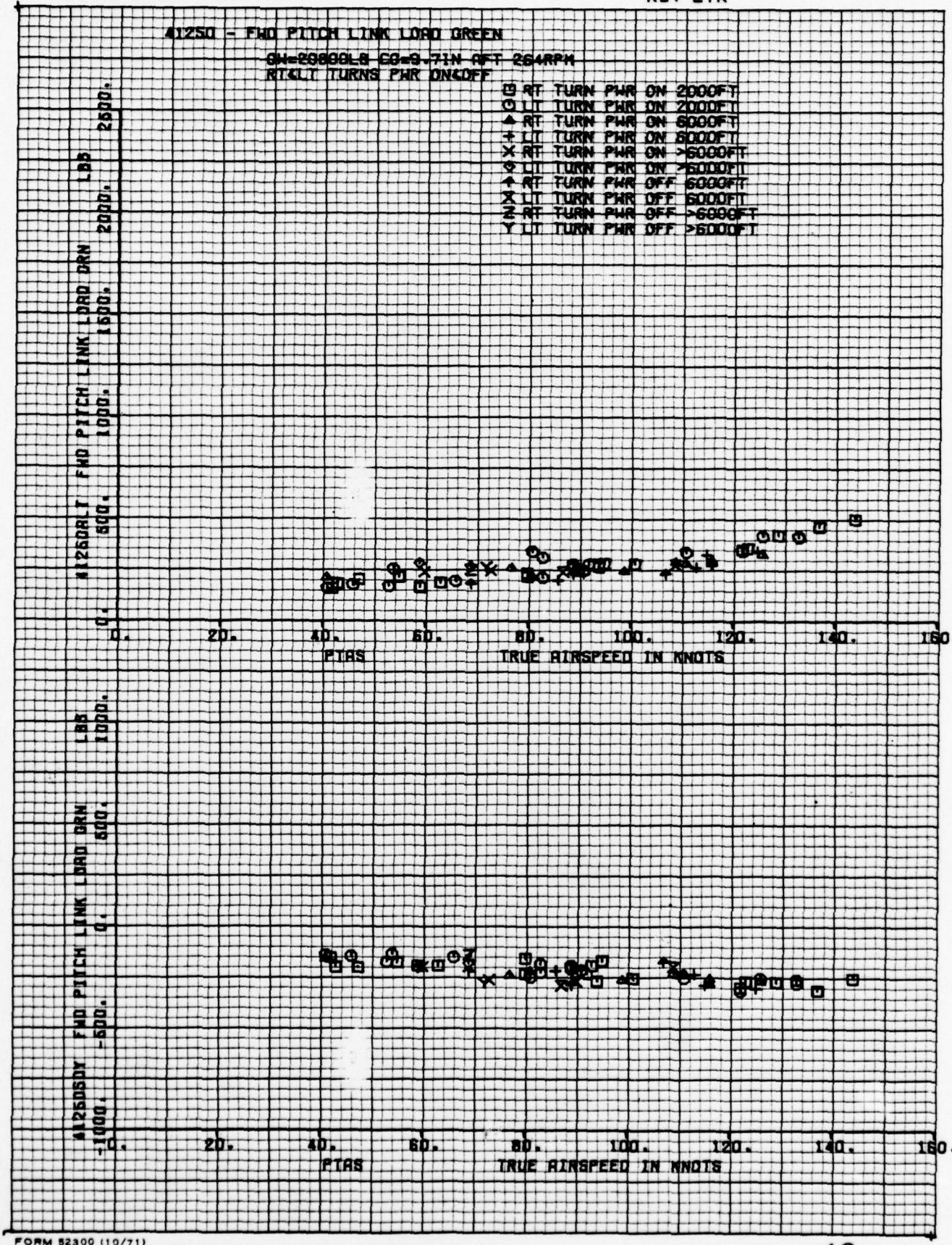

41250 - FWD PITCH LINK LOAD GREEN
GW=26000LB CG=9.71IN ACT
AD=≥6000FT RPM=264
FLT 124 LEVEL FLT
41250LT FWD PITCH LINK LOAD DRN LBS
2600.
2000.
1600.
1000.
600.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS
41250DN FWD PITCH LINK LOAD DRN LBS
1000.
600.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

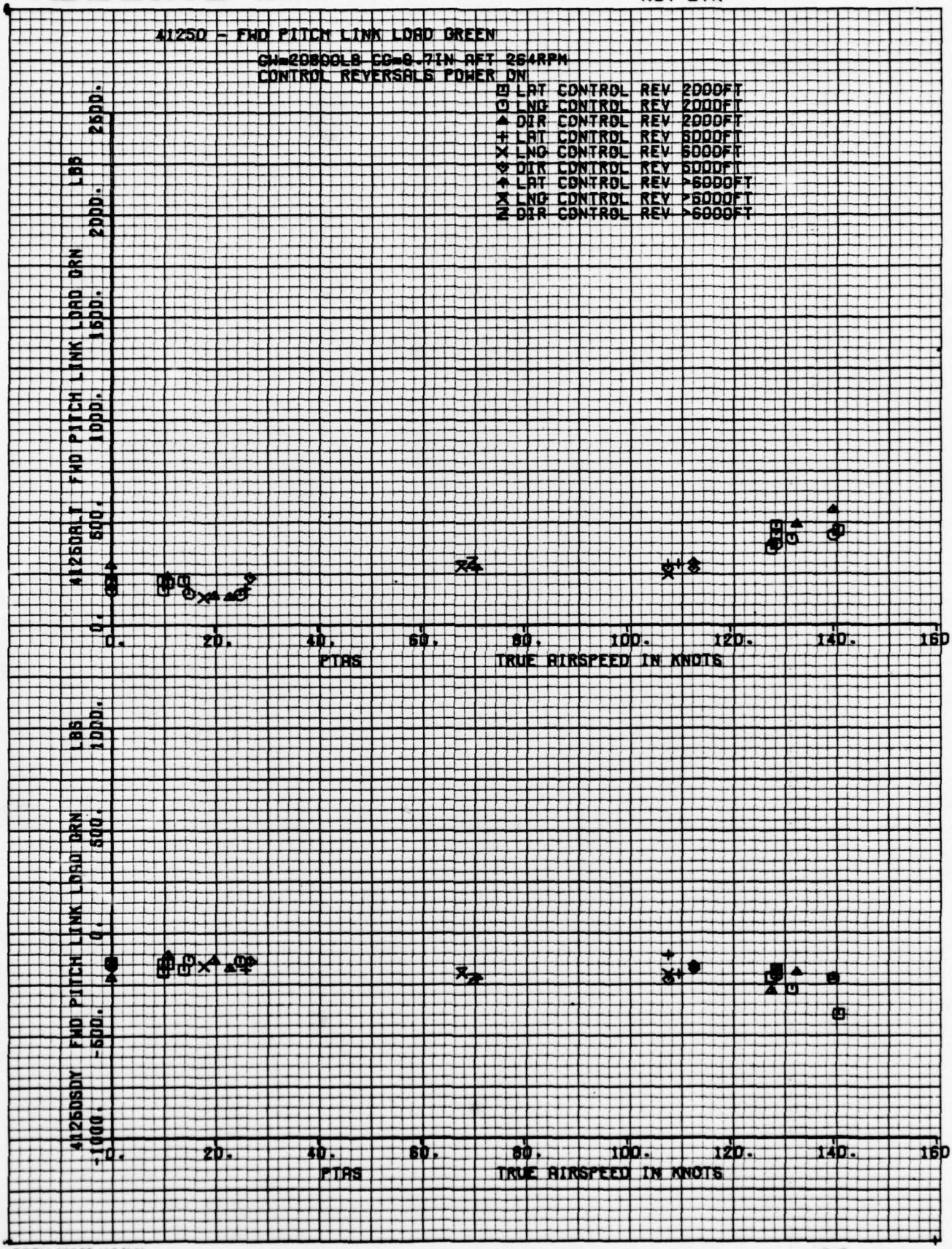


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41250 - FWD PITCH LINK LOAD GREEN
GW=200000LB CG=8.71IN AFT 284KDM
PULLUPS-POWER ON & OFF
LNG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 6000FT
CP PULLUP PWR ON 6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR OFF ANY HD
CP PULLUP PWR OFF ANY ALT
FPD RECOVERY ANY ALT
41250ALT FWD PITCH LINK LOAD DRM LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
41250DY FWD PITCH LINK LOAD DRM LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

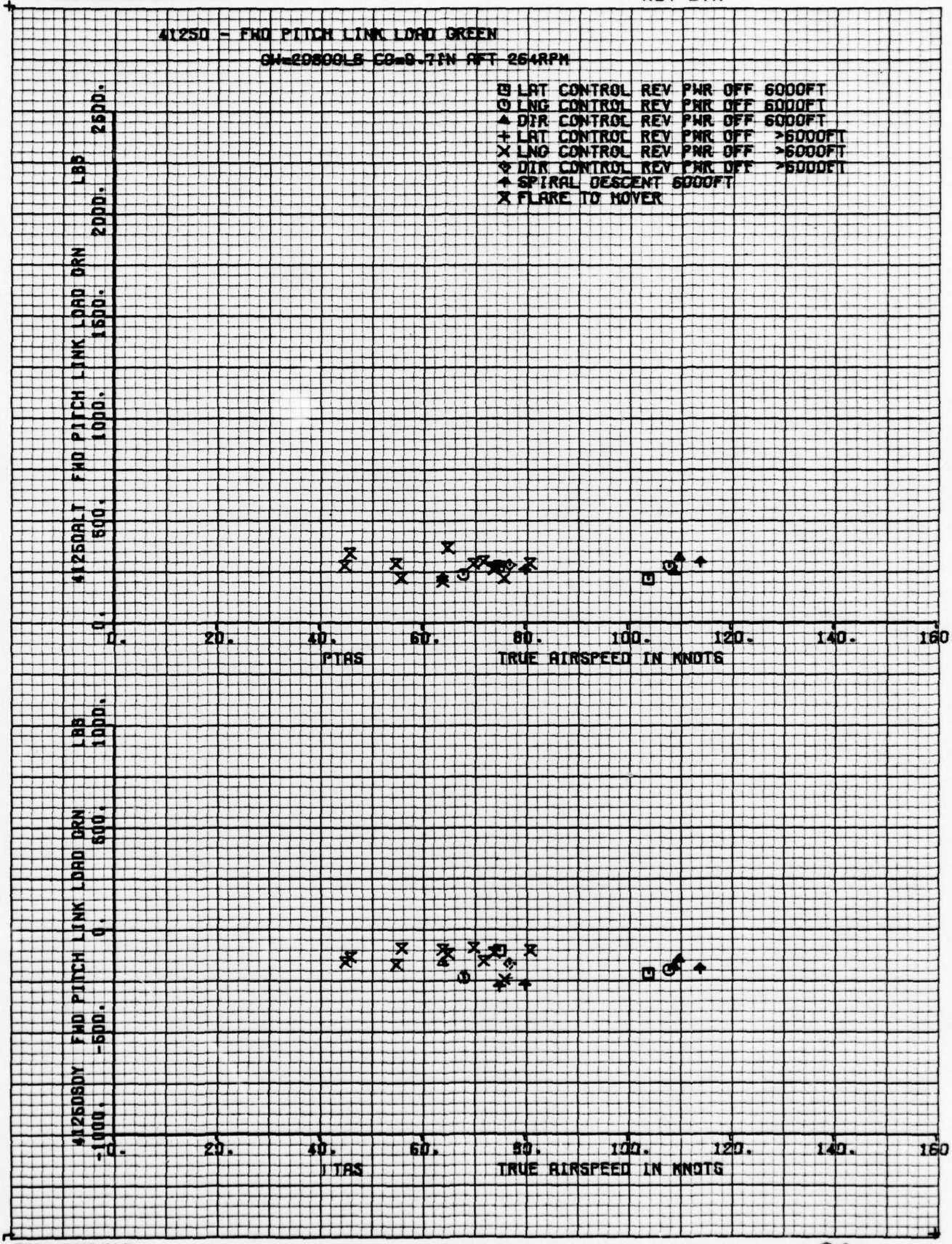

41250 - FWD PITCH LINK LOAD GREEN
GW=29800LB CG=9.71IN AFT 264RPM
RT&LT TURNS PWR ON&OFF
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
RT TURN PWR ON 6000FT
LT TURN PWR ON 6000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF 6000FT
LT TURN PWR OFF 6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
41250RLT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41250SDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

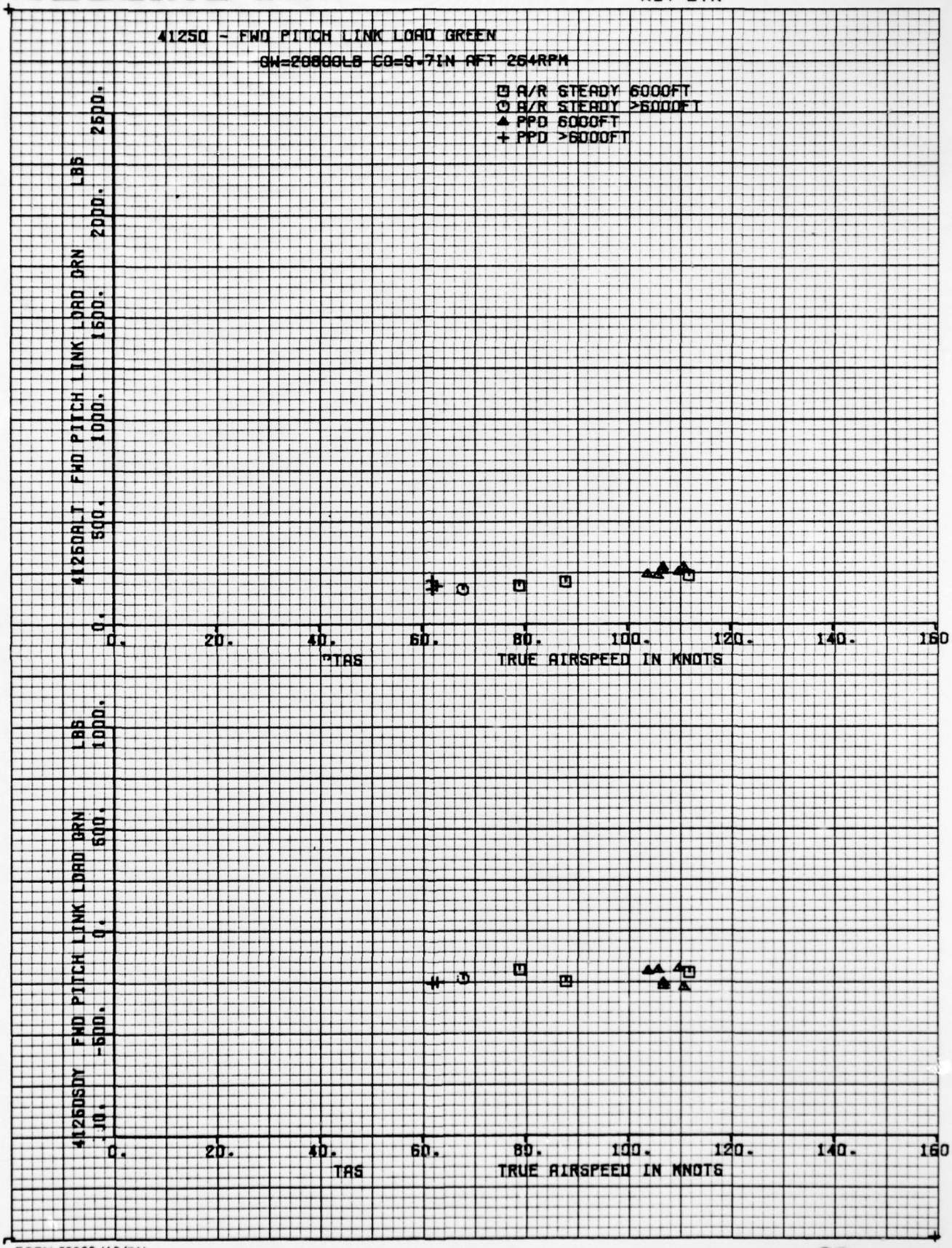


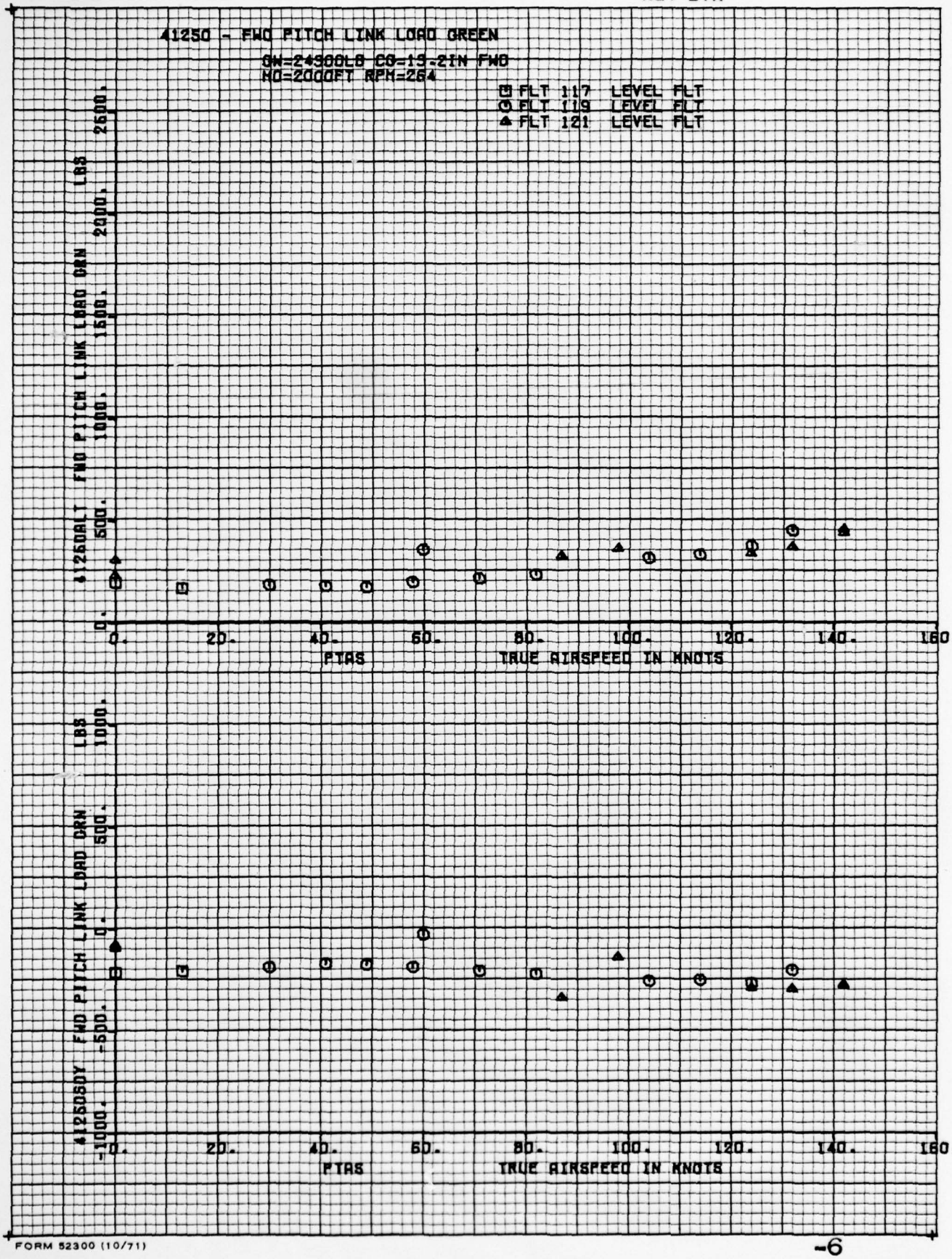
FORM 52300 (10/71)

THE BOEING COMPANY

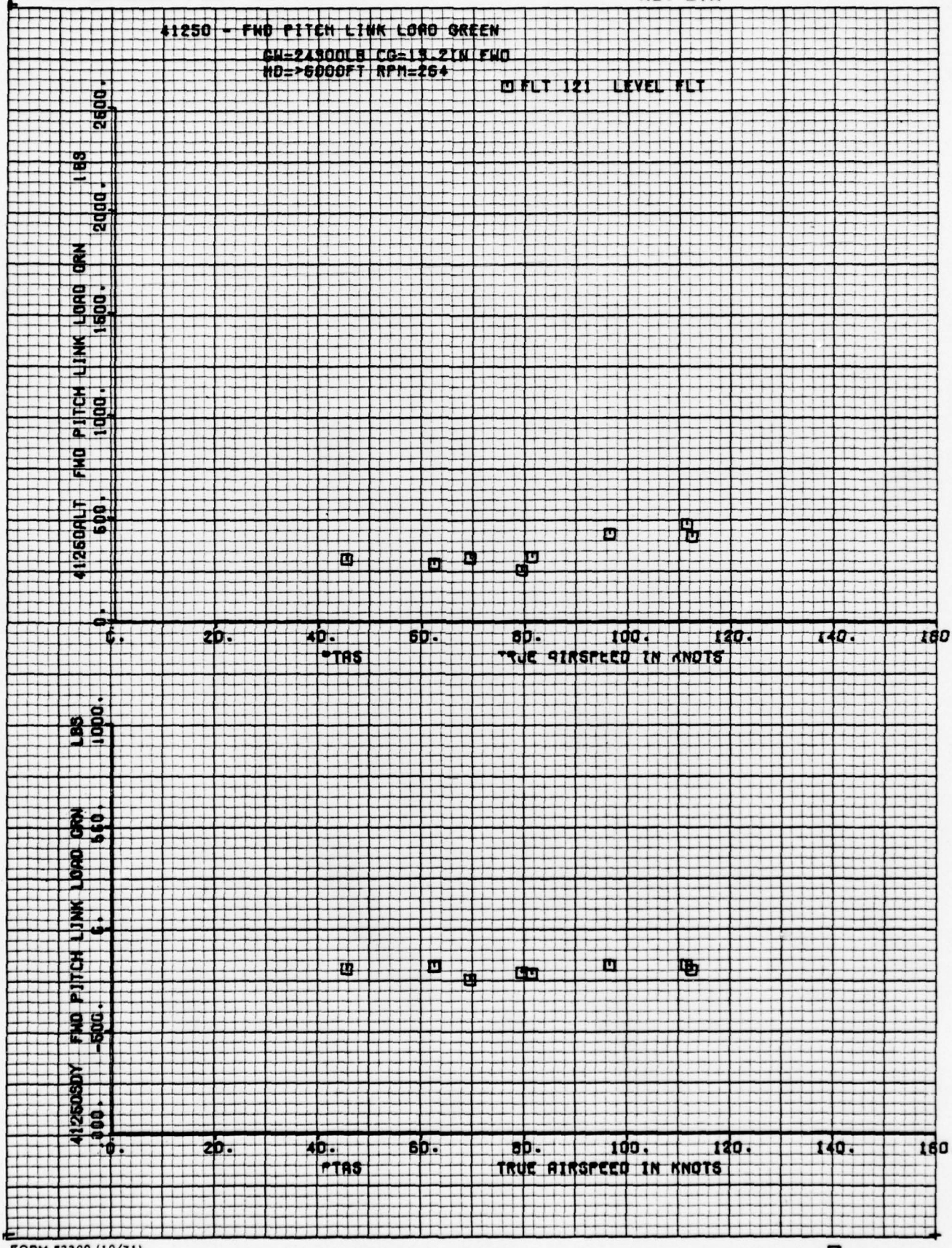


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41250 - FWD PITCH LINK LOAD GREEN
GW=20000LB CG=9.7IN AFT 264RPM
A/R STEADY 6000FT
A/R STEADY >6000FT
PPD 6000FT
PPD >6000FT
4126DALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
TAS
TRUE AIRSPEED IN KNOTS
4126DSDY FWD PITCH LINK LOAD DRN LBS
1000.
600.
0.
-600.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
TAS
TRUE AIRSPEED IN KNOTS

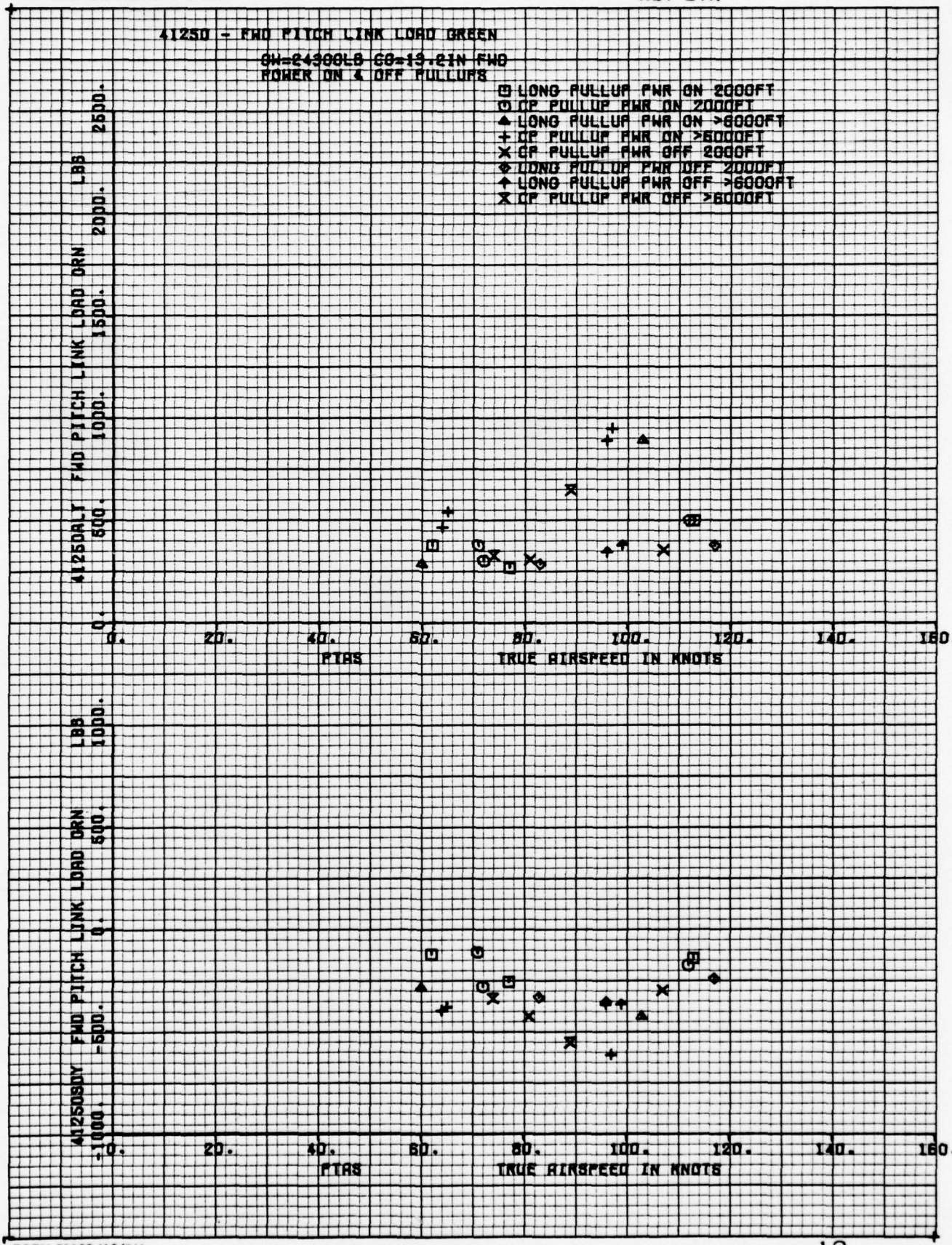

41250 - FWD PITCH LINK LOAD GREEN
GW=24300LB CG=13.2IN FWD
HO=2000FT RPM=264
FLT 117 LEVEL FLT
FLT 119 LEVEL FLT
FLT 121 LEVEL FLT
41250ALT FWD PITCH LINK LOAD GRN LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
41250SDY FWD PITCH LINK LOAD GRN LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

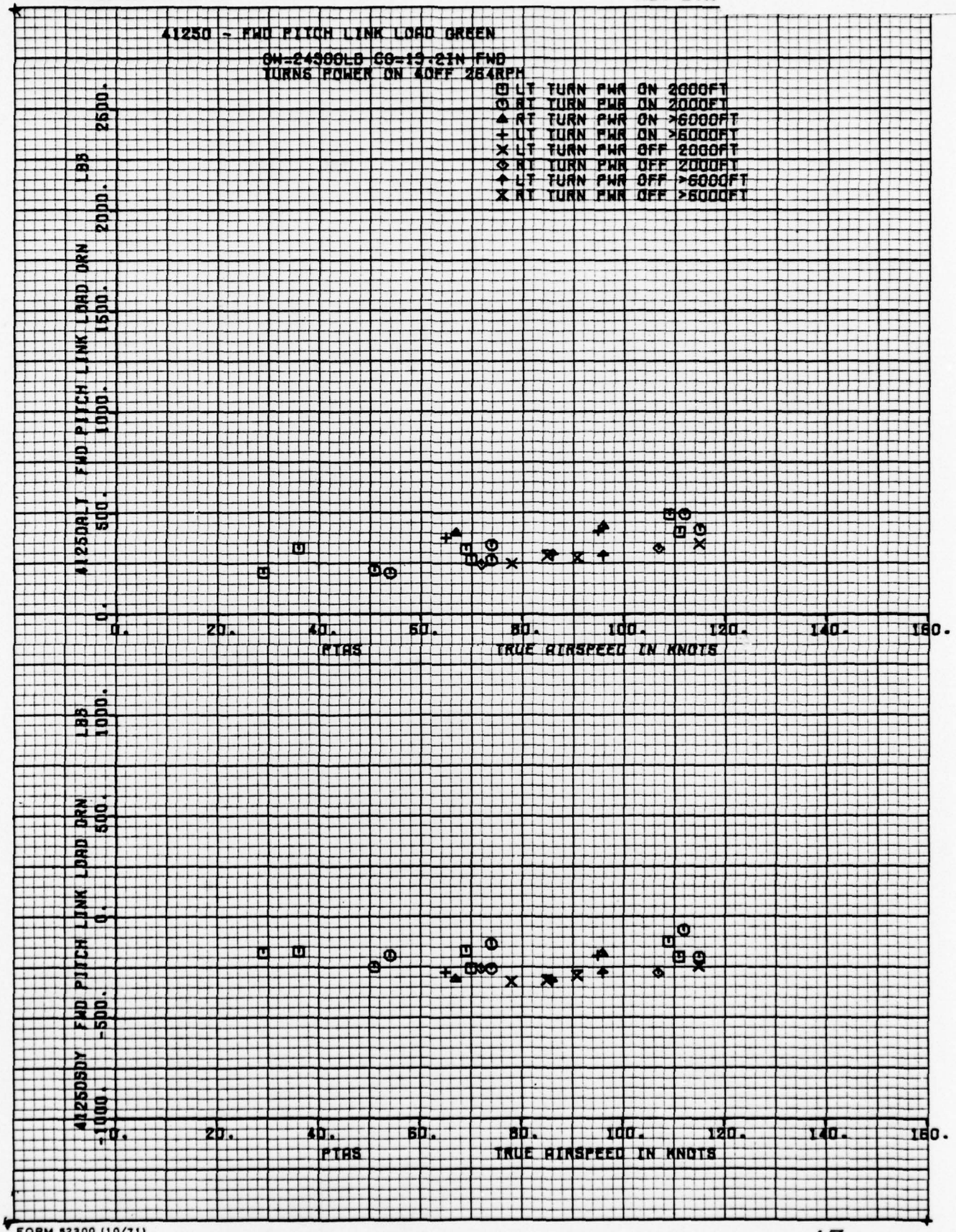
THE BOEING COMPANY



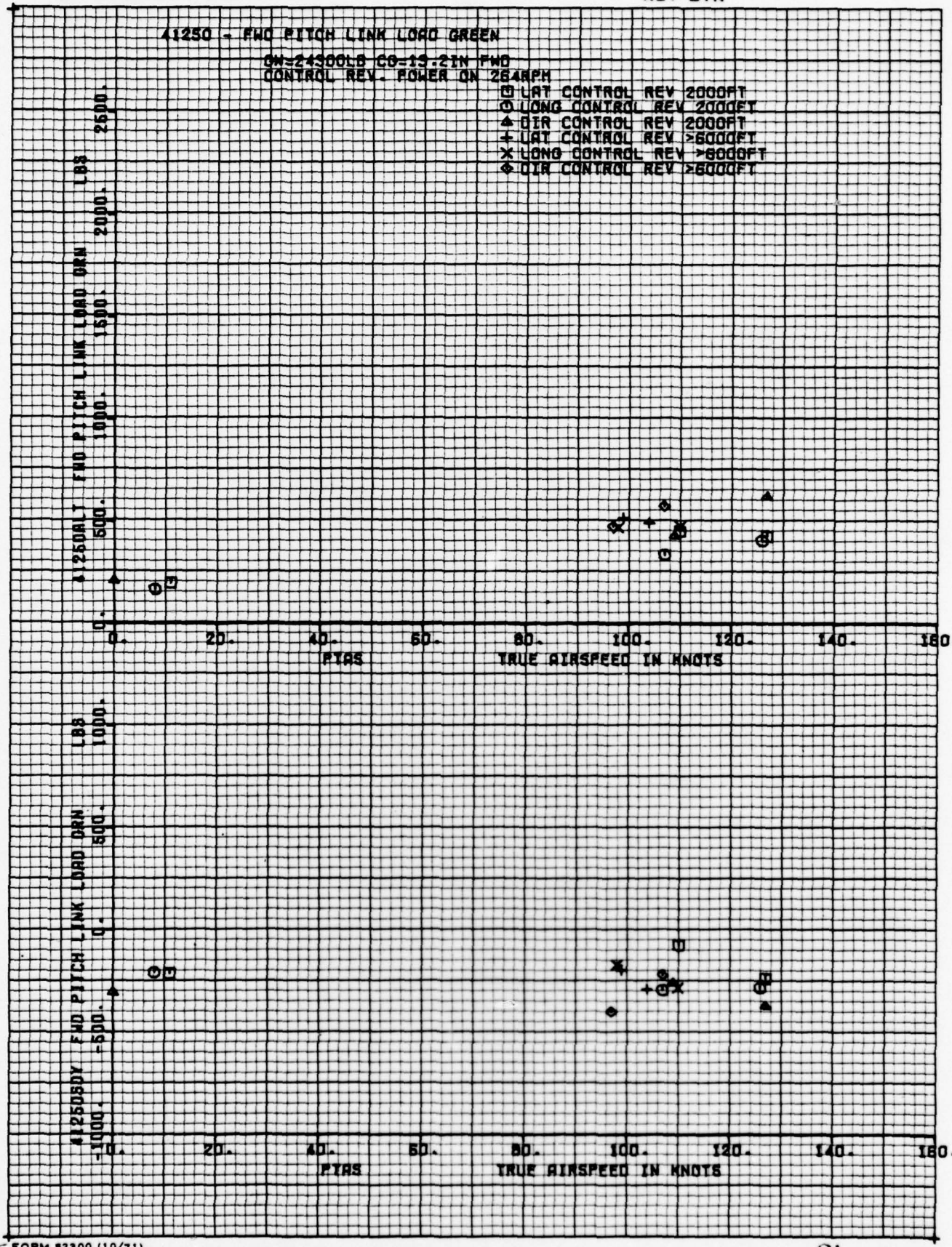
FORM 52300 (10/71)

THE BOEING COMPANY



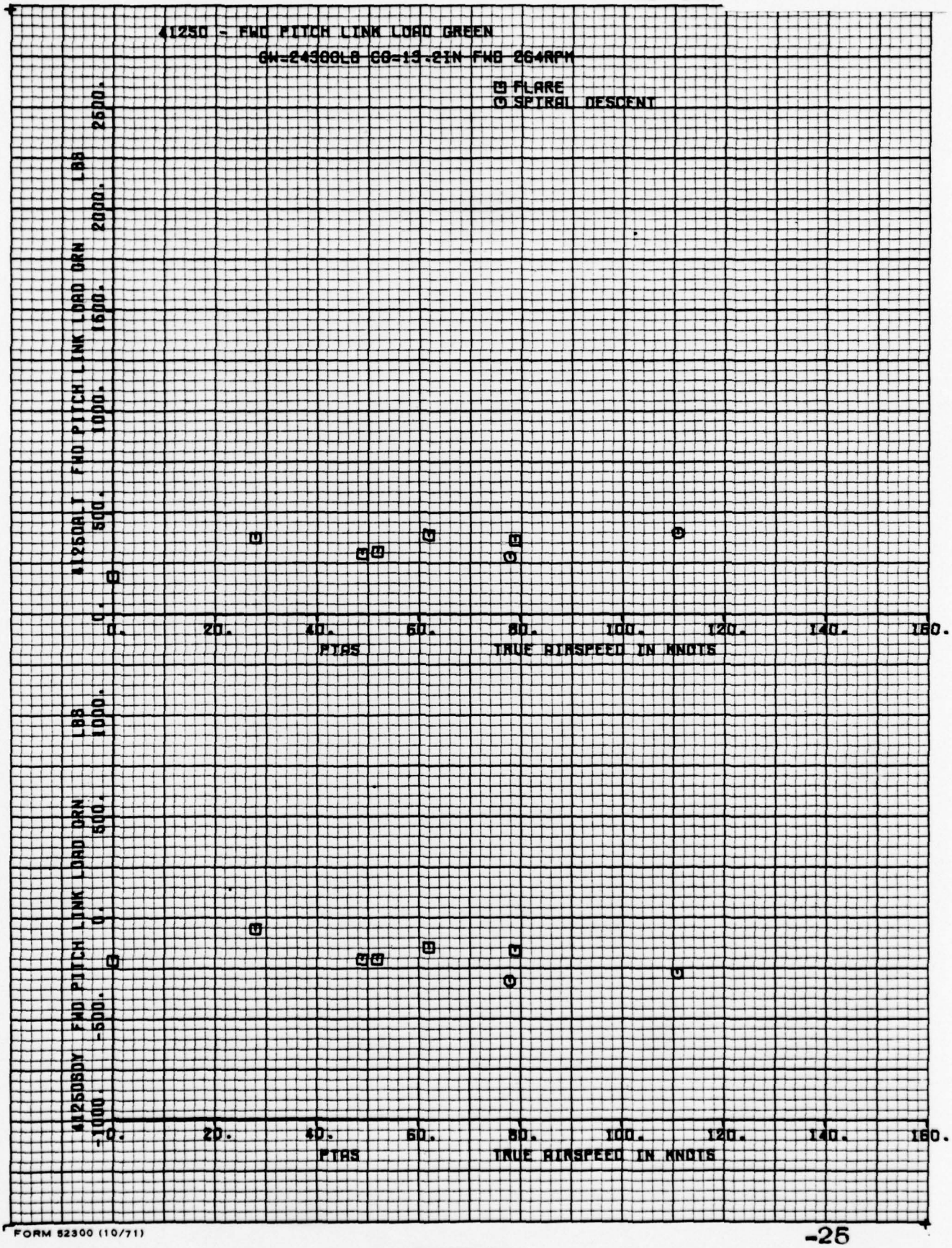

41250 - FWD PITCH LINK LOAD GREEN
GW=24500LB CG=19.21N FWD
TURNS POWER ON 40FF 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
LT TURN PWR OFF >6000FT
RT TURN PWR OFF >6000FT
41250ALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS
41250SDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS

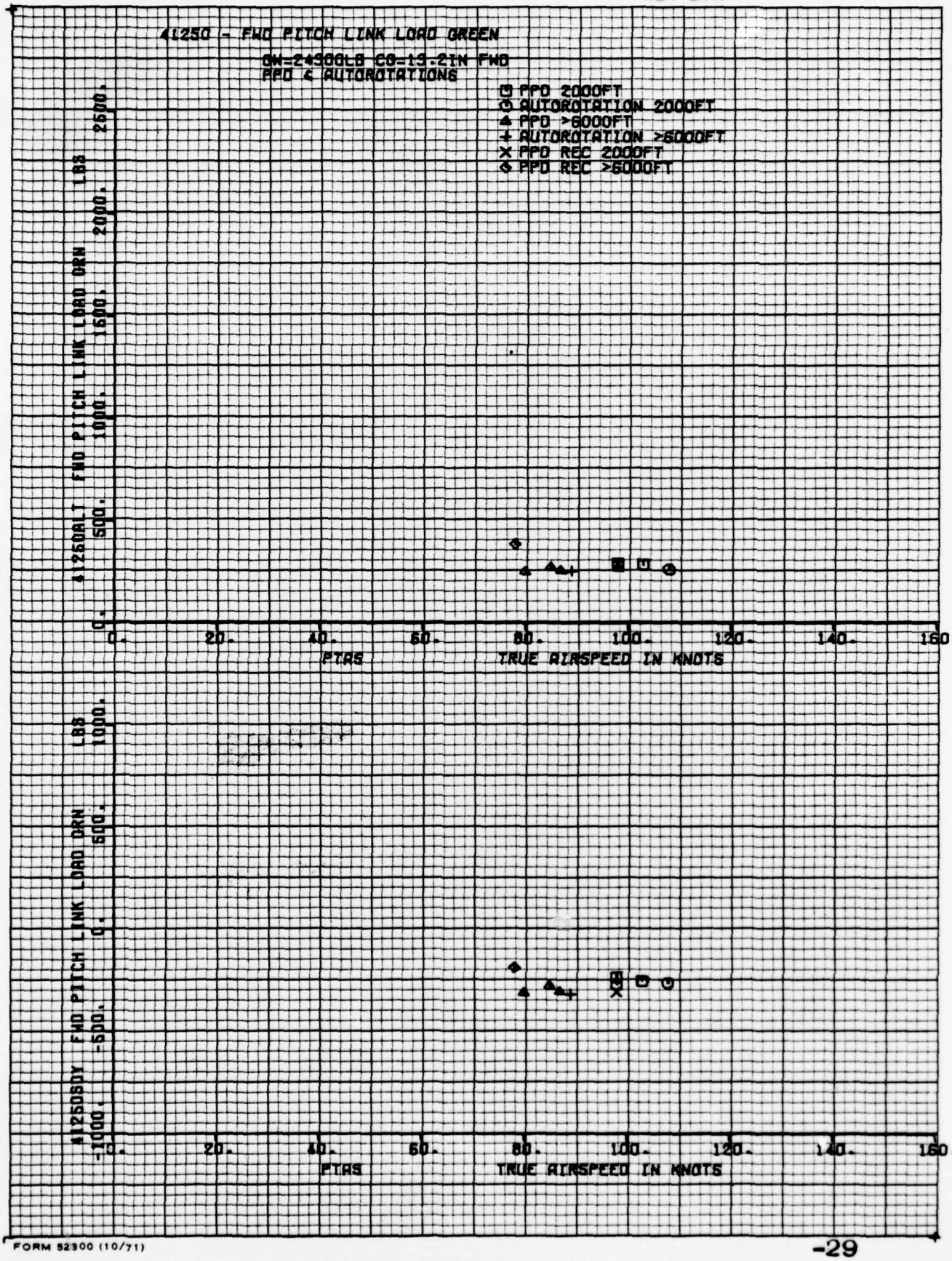
THE BOEING COMPANY



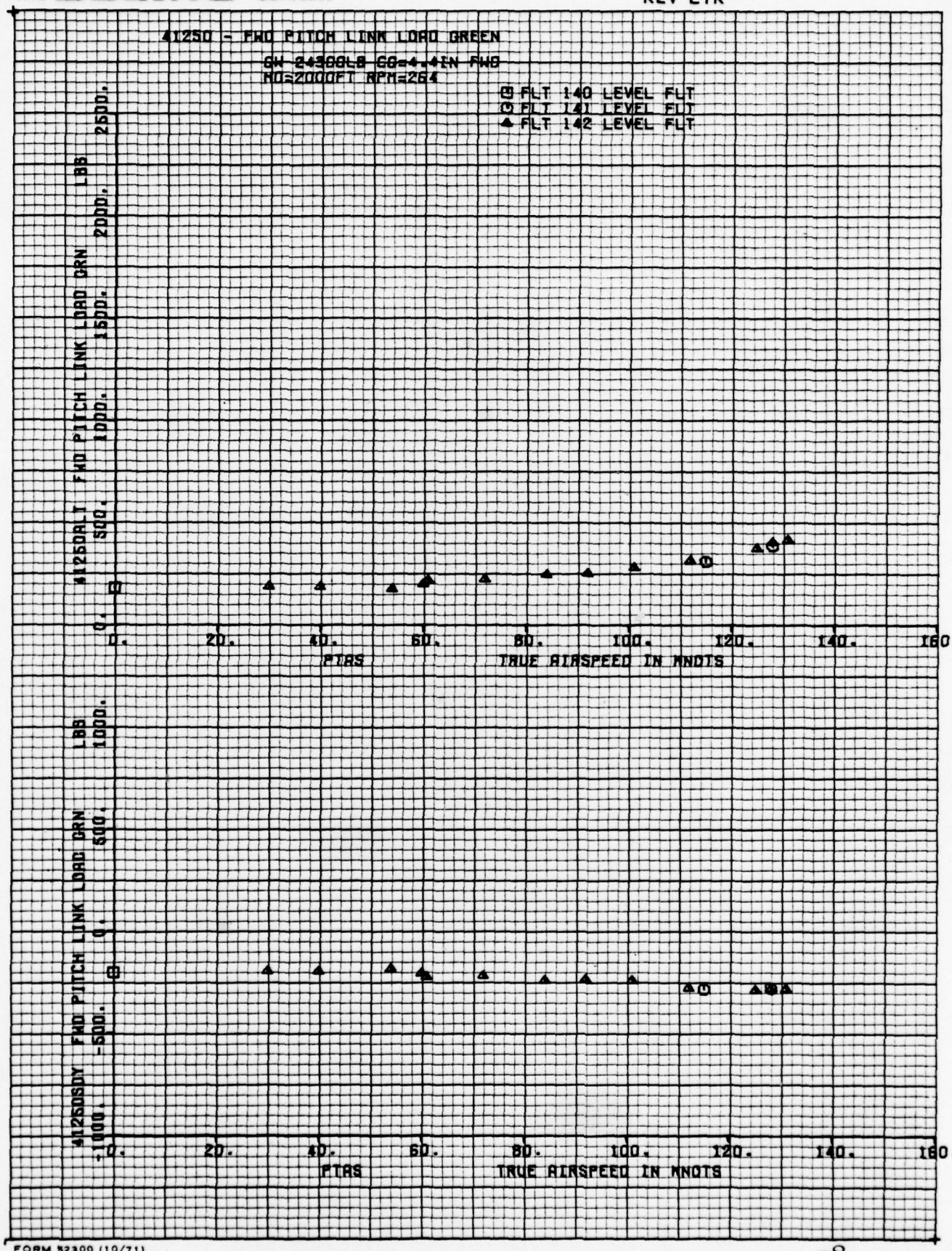
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SHEET 44

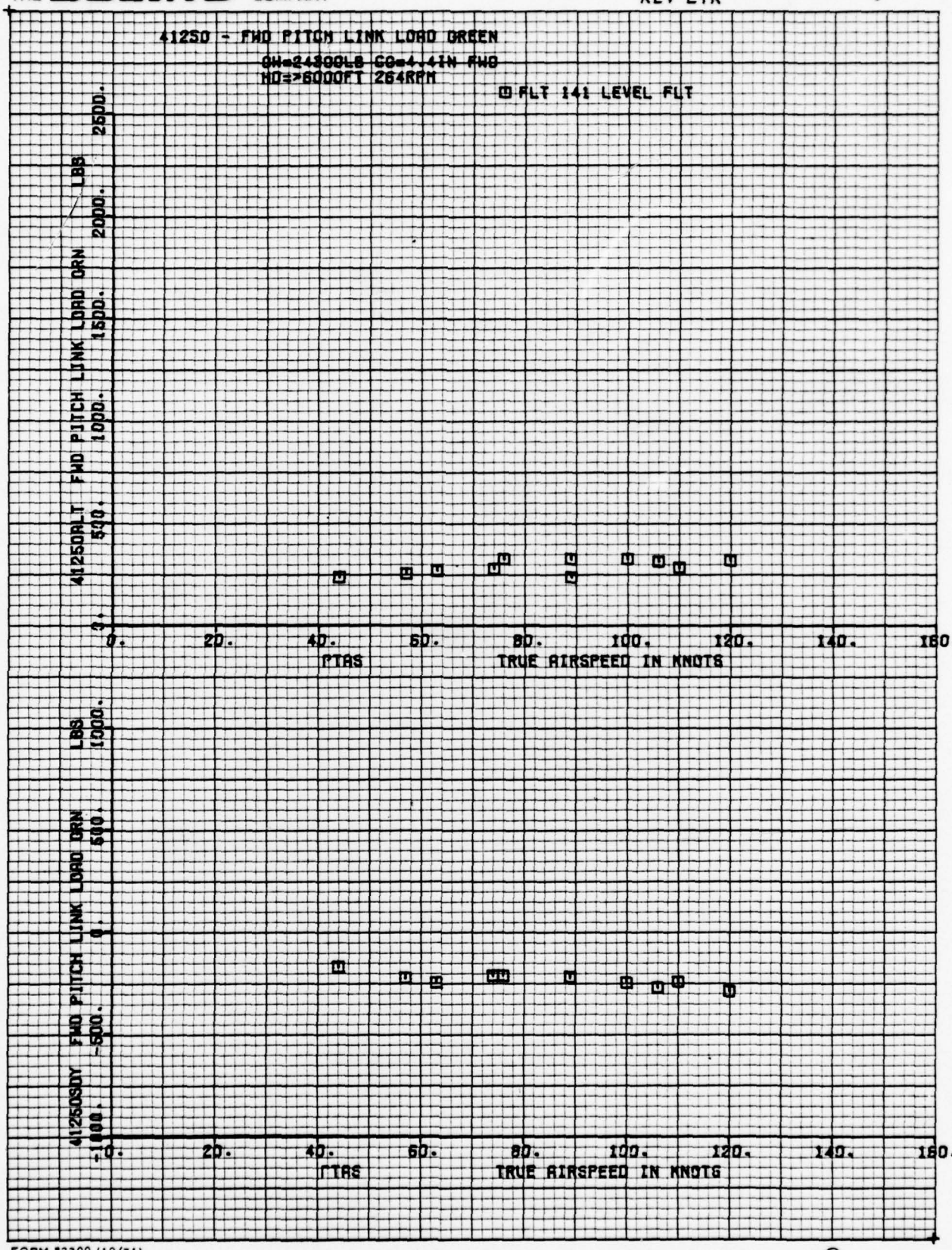

41250 - FWD PITCH LINK LOAD GREEN
GW=24500LB CG=15.2IN FWD 264RPM
FLARE
SPIRAL DESCENT
41250ALI FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
41250BDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

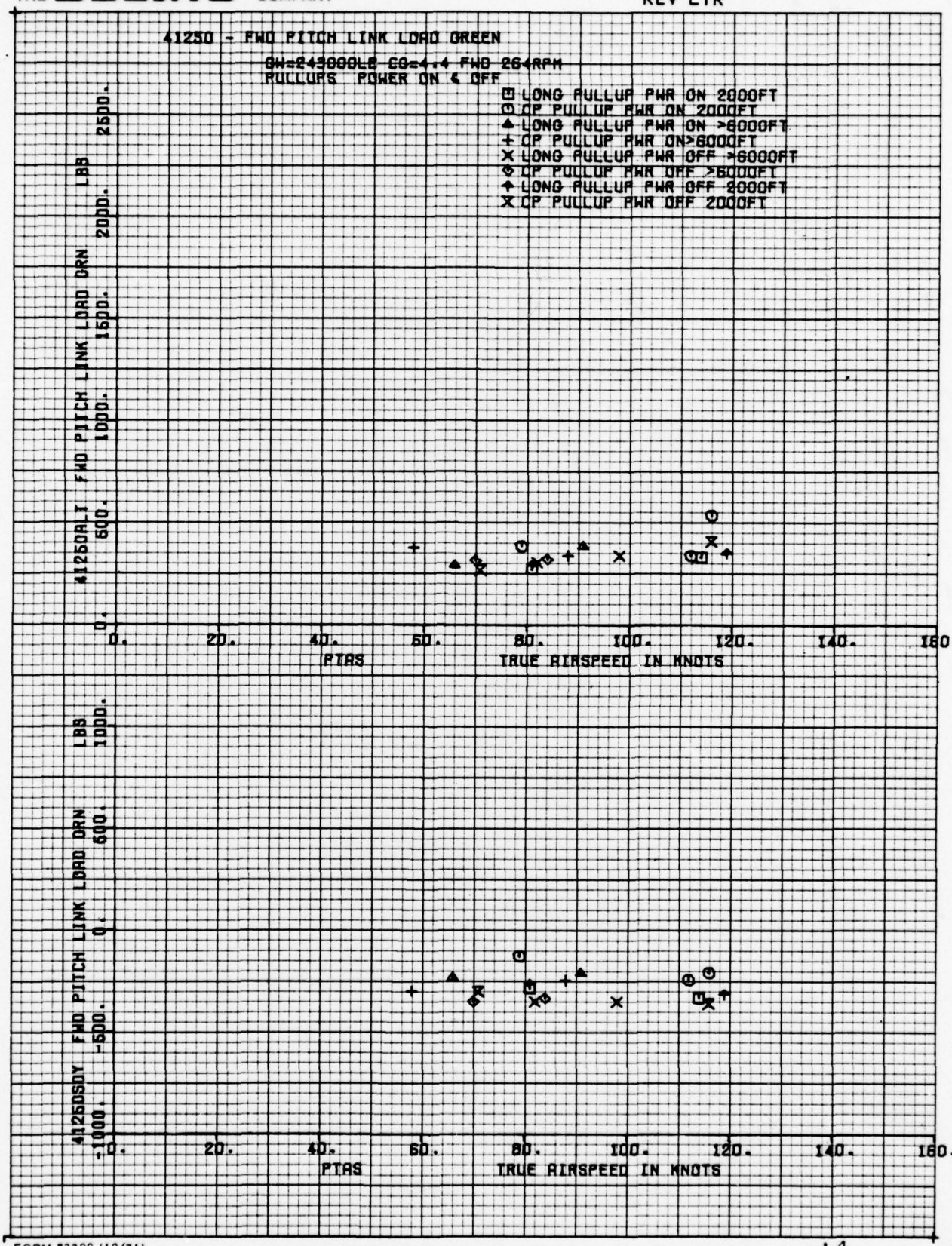

41250 - FWD PITCH LINK LOAD GREEN
GW=24300LB CG=13.2IN FWD
FPO & AUTOROTATIONS
FPO 2000FT
AUTOROTATION 2000FT
FPO >6000FT
AUTOROTATION >6000FT
FPO REC 2000FT
FPO REC >6000FT
41250ALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41250BDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

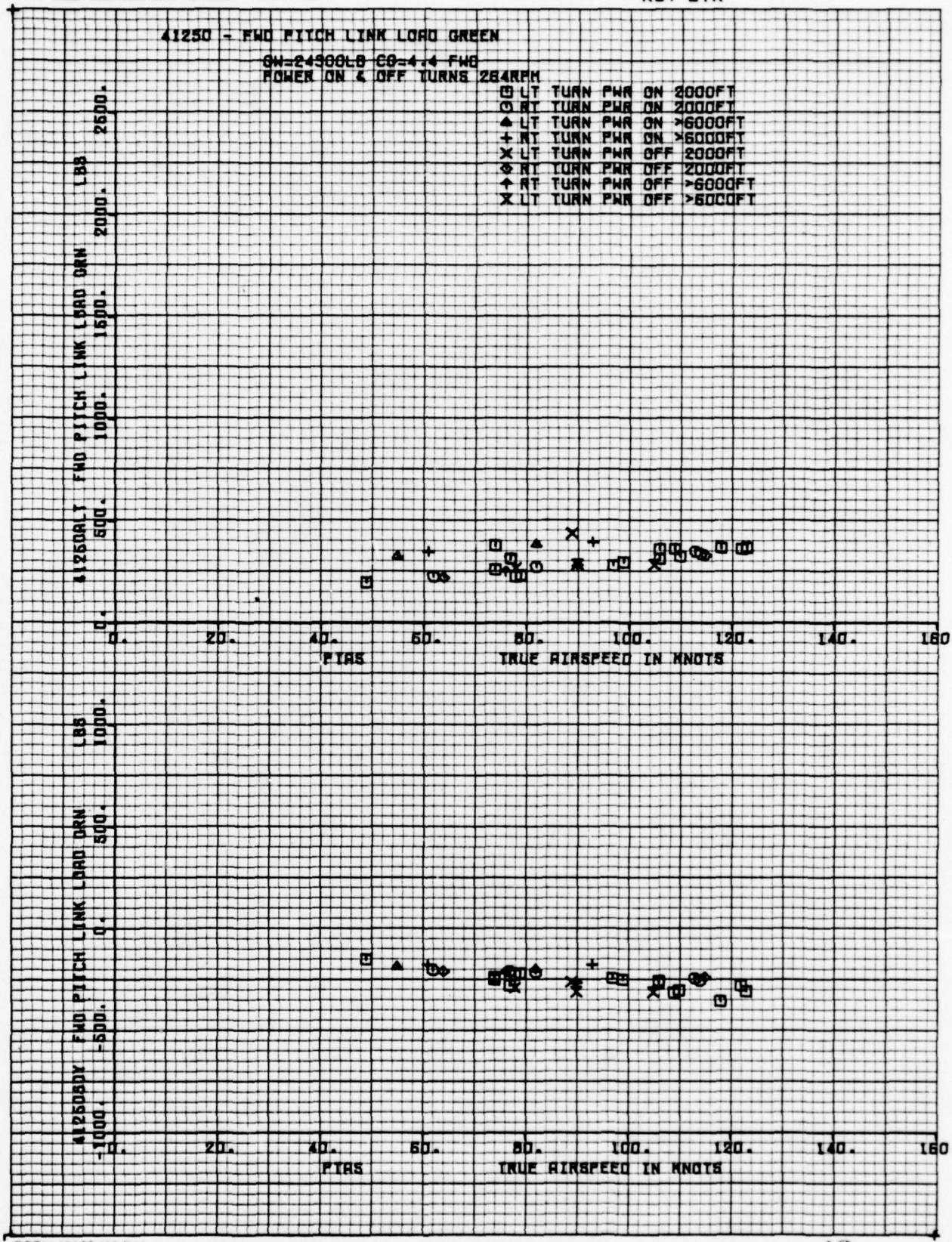
THE BOEING COMPANY



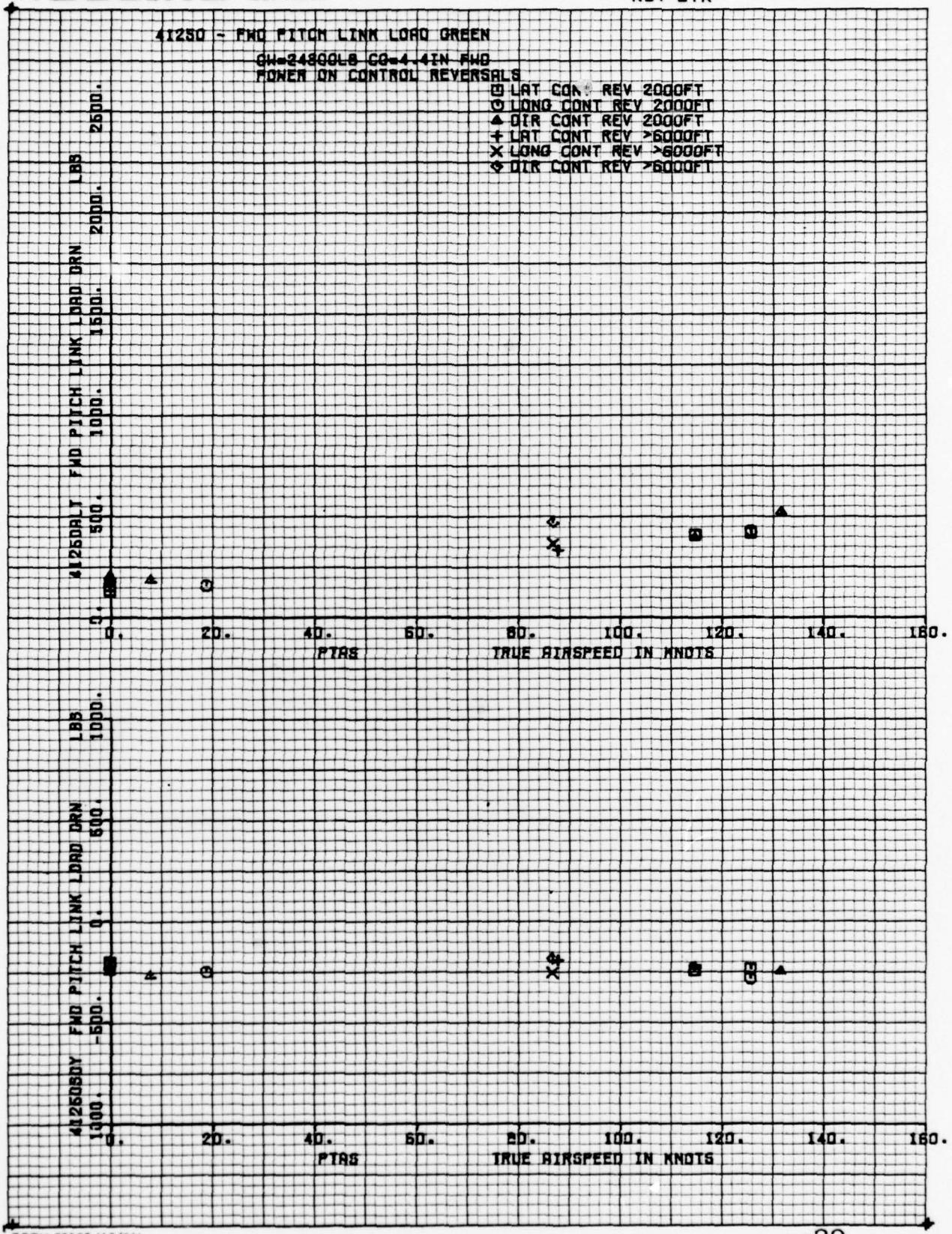
FORM 52300 (10/71)


41250 - FWD PITCH LINK LOAD GREEN
GW=243000LB CG=4.4IN FWD
HO=>6000FT 264RPM
FLT 141 LEVEL FLT
41250ALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
41250SDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS


41250 - FWD PITCH LINK LOAD GREEN
GW=243000LB CG=4.4 FWD 264RPM
PULLUPS POWER ON & OFF
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON>6000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
LONG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
41250ALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS
41250SDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS

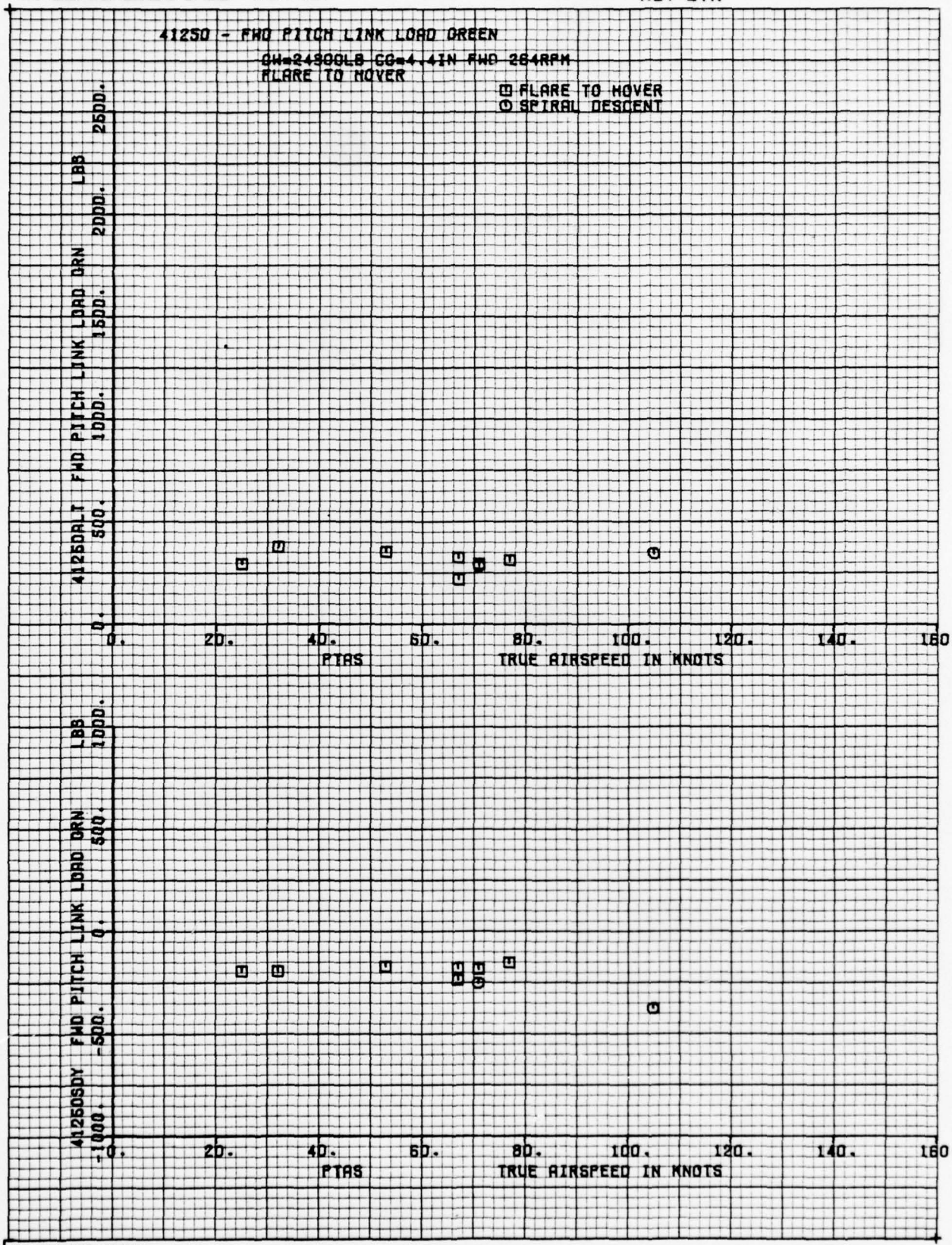

41250 - FWD PITCH LINK LOAD GREEN
GW=24300LB CG=4.4 FWD
POWER ON & OFF TURNS 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
LT TURN PWR ON >6000FT
RT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
41250ALT FWD PITCH LINK LOAD DRN LBS
2600.
2000.
1600.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
41250BDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

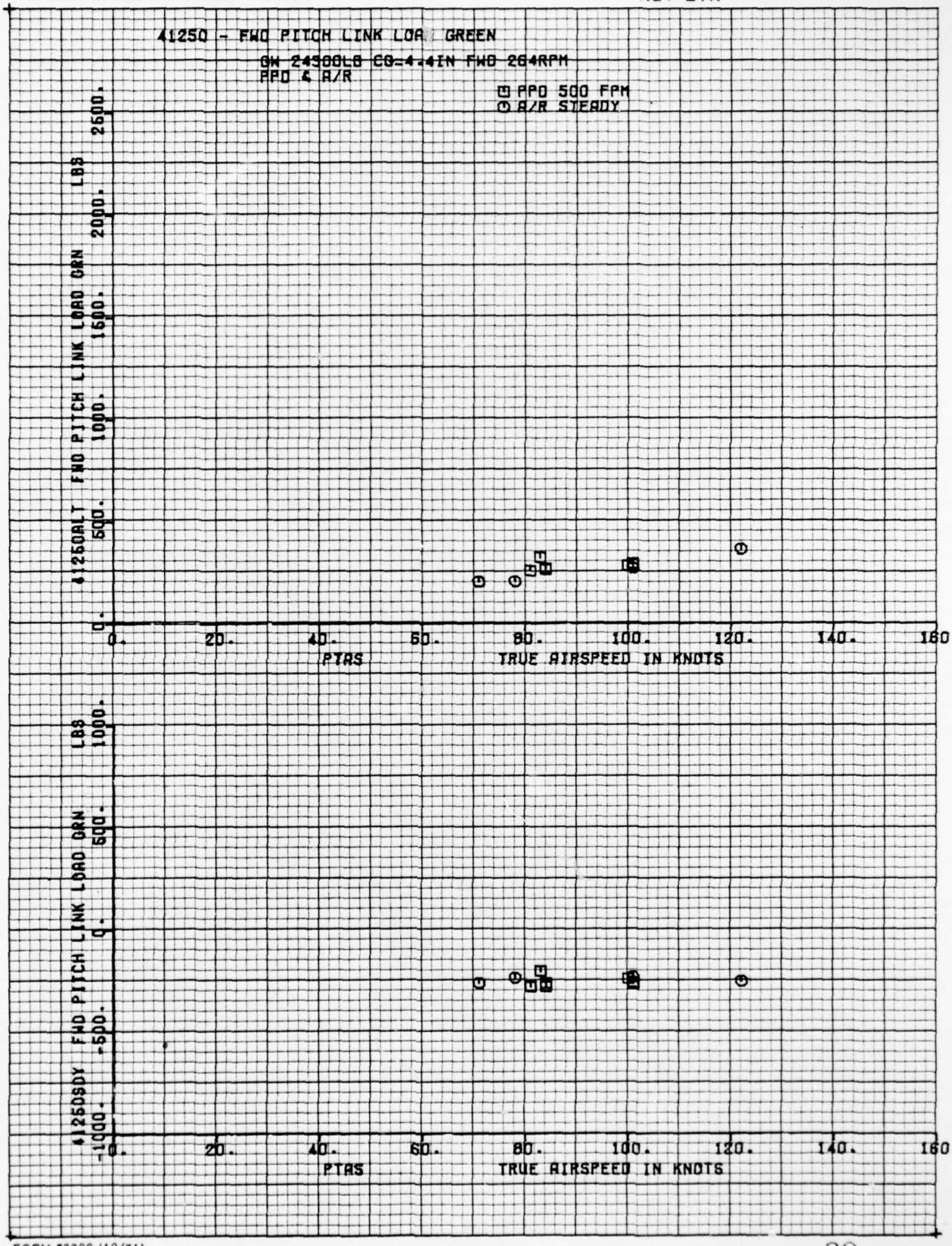


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SHEET 51

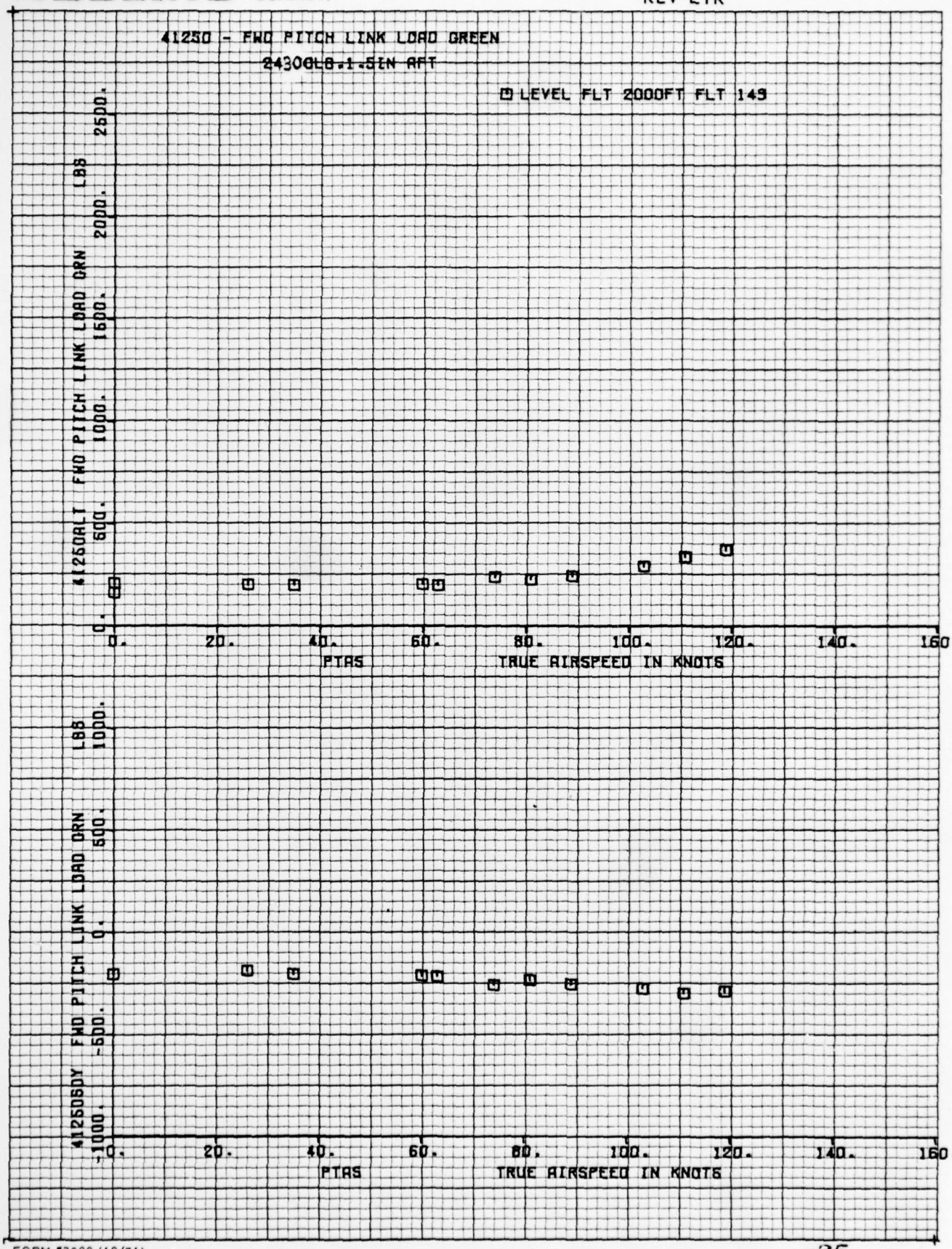

41250 - FWD PITCH LINK LOAD GREEN
GW=24900LB CG=4.41IN FWD 264RPM
FLARE TO HOVER
FLARE TO HOVER
SPIRAL DESCENT
4125DALT FWD PITCH LINK LOAD DRN LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
4125DSDY FWD PITCH LINK LOAD DRN LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



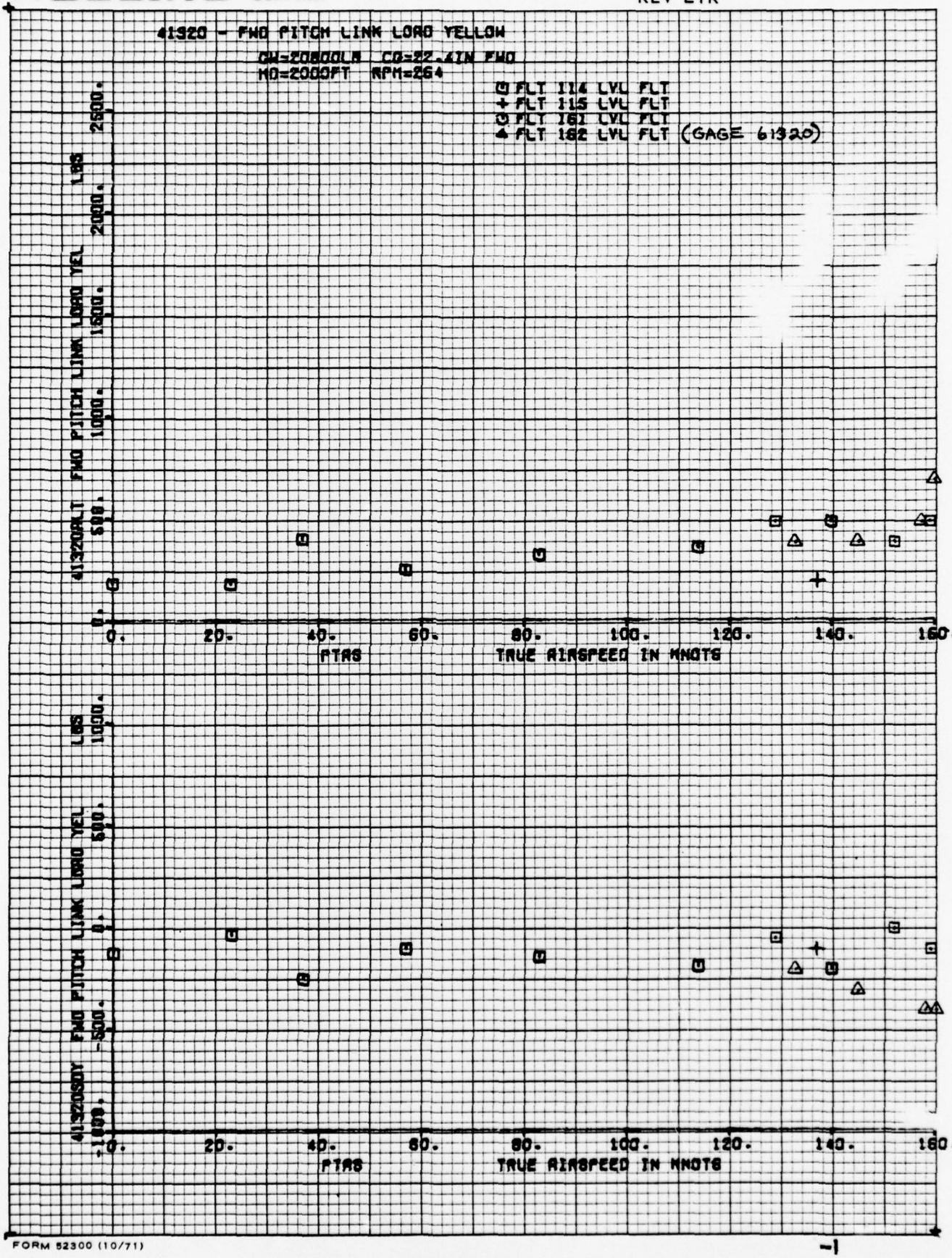
FORM 52300 (10/71)

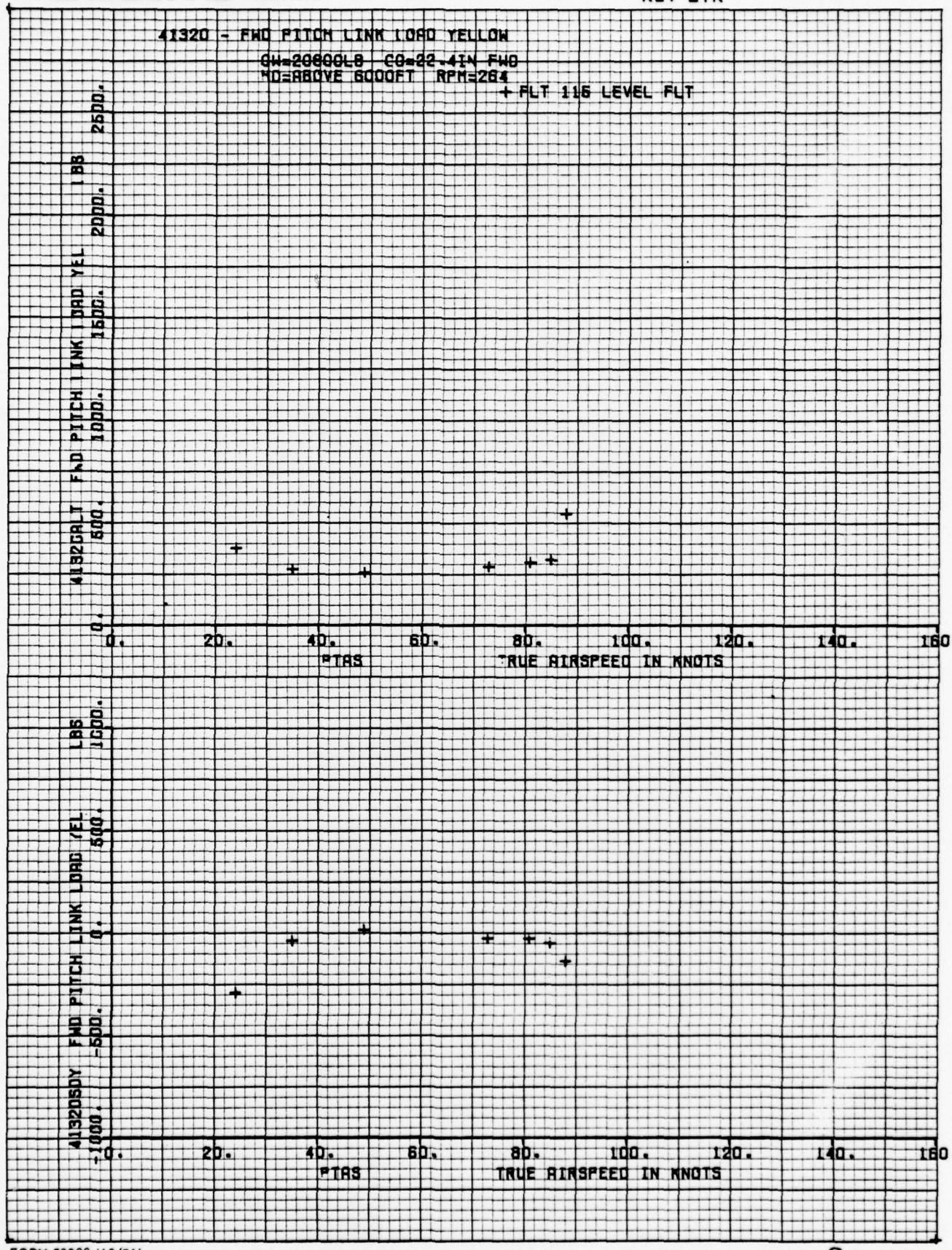
THE BOEING COMPANY

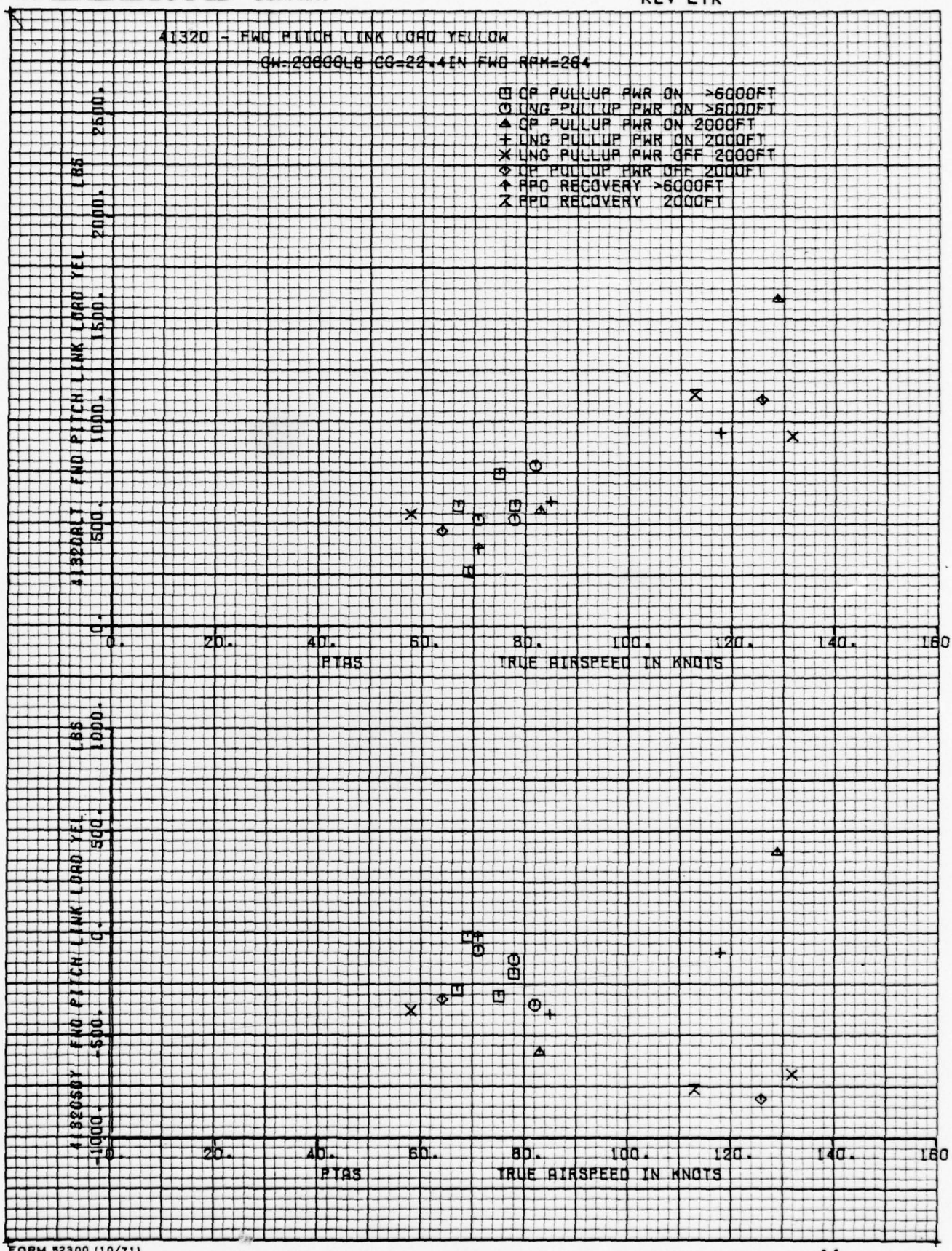


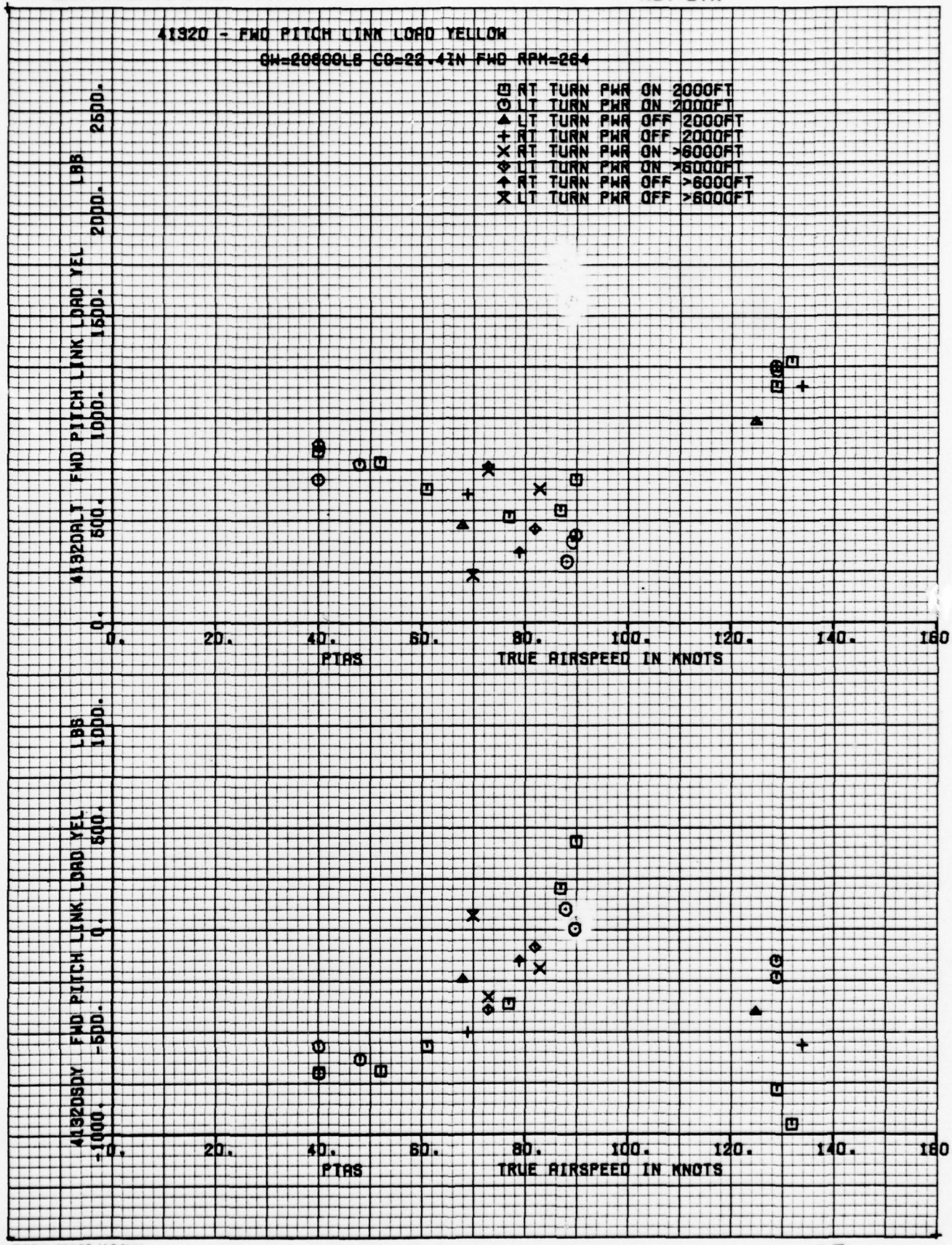
FORM 52300 (10/71)

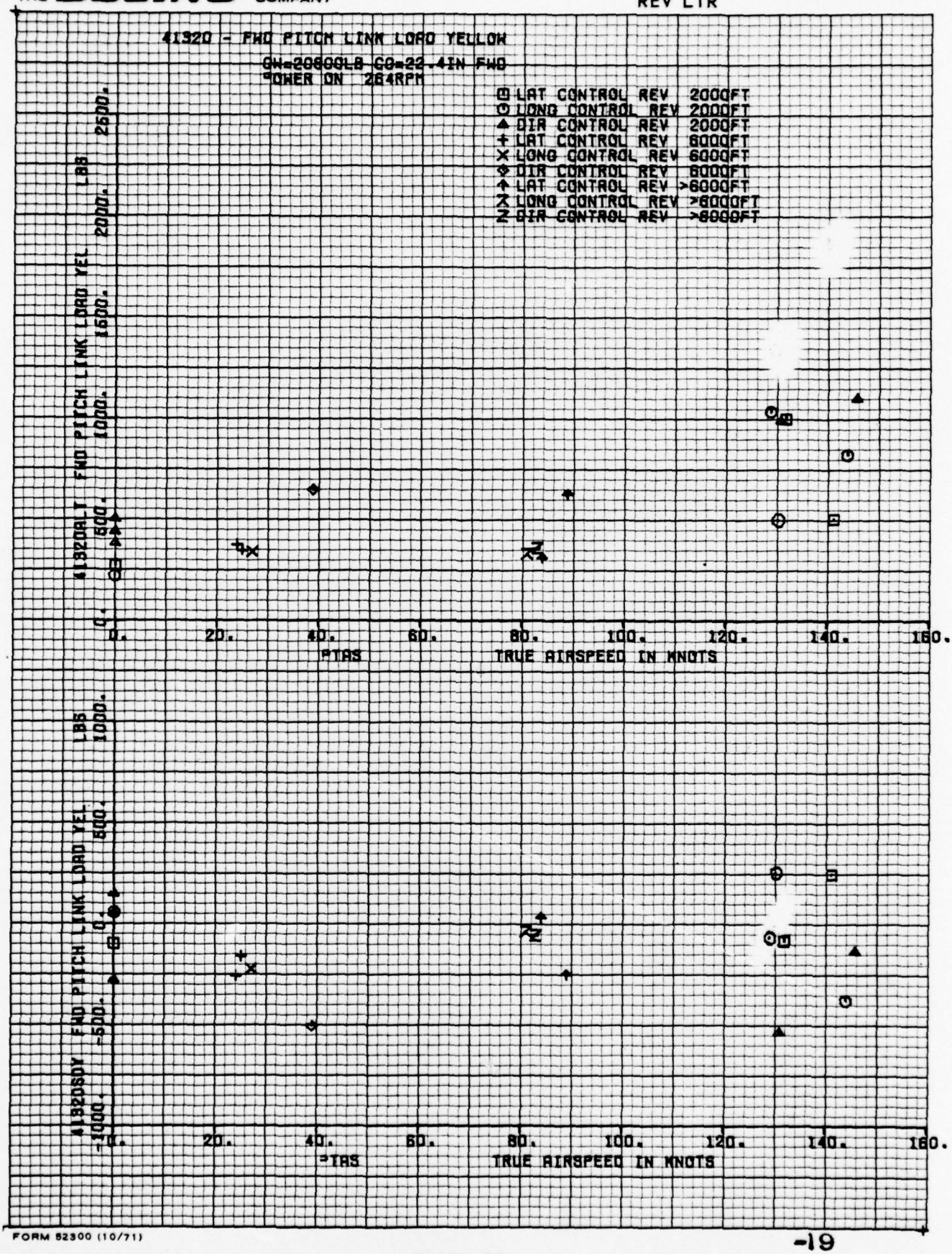
4.2 Forward Pitch Link, Yellow Blade

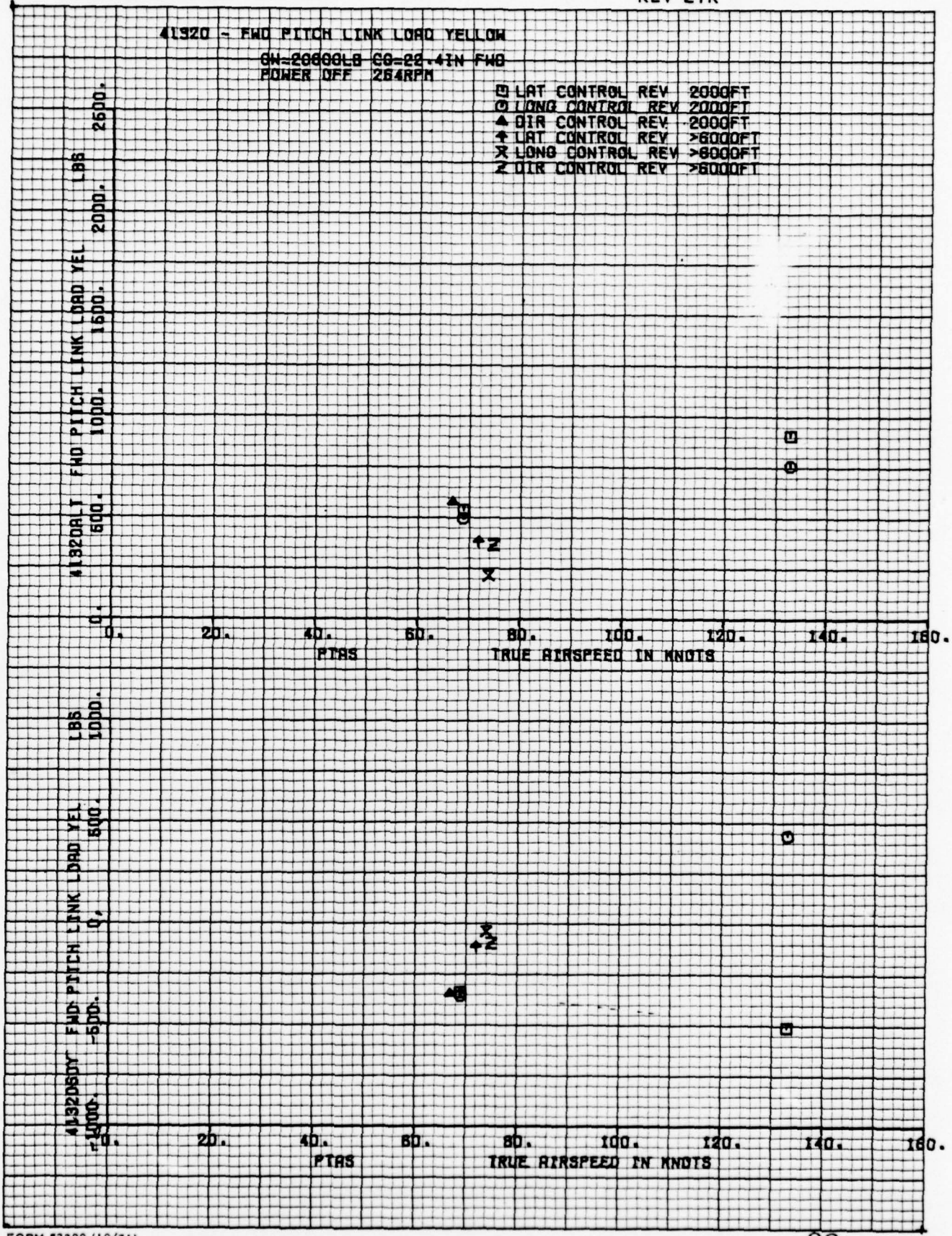

41320 - FWD PITCH LINK LORD YELLOW
GW=20800LB CG=22.4IN FWD
HO=2000FT RPM=264
FLT 114 LVL FLT
+ FLT 115 LVL FLT
FLT 161 LVL FLT
FLT 162 LVL FLT (GAGE 61320)
41320ALT FWD PITCH LINK LORD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
FTAS TRUE AIRSPEED IN KNOTS
41320SDY FWD PITCH LINK LORD YEL LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
FTAS TRUE AIRSPEED IN KNOTS


41320 - FWD PITCH LINK LOAD YELLOW
GW=206000LB CG=22.4IN FWD
HO=ABOVE 6000FT RPM=264
+ FLT 116 LEVEL FLT
4132GALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
41320SDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS


41320 - FWD PITCH LINK LOAD YELLOW
GW=20000LB CG=22.4IN FWD RPM=264
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 2000FT
LNG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
APD RECOVERY >6000FT
APD RECOVERY 2000FT
41320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
41320SOY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

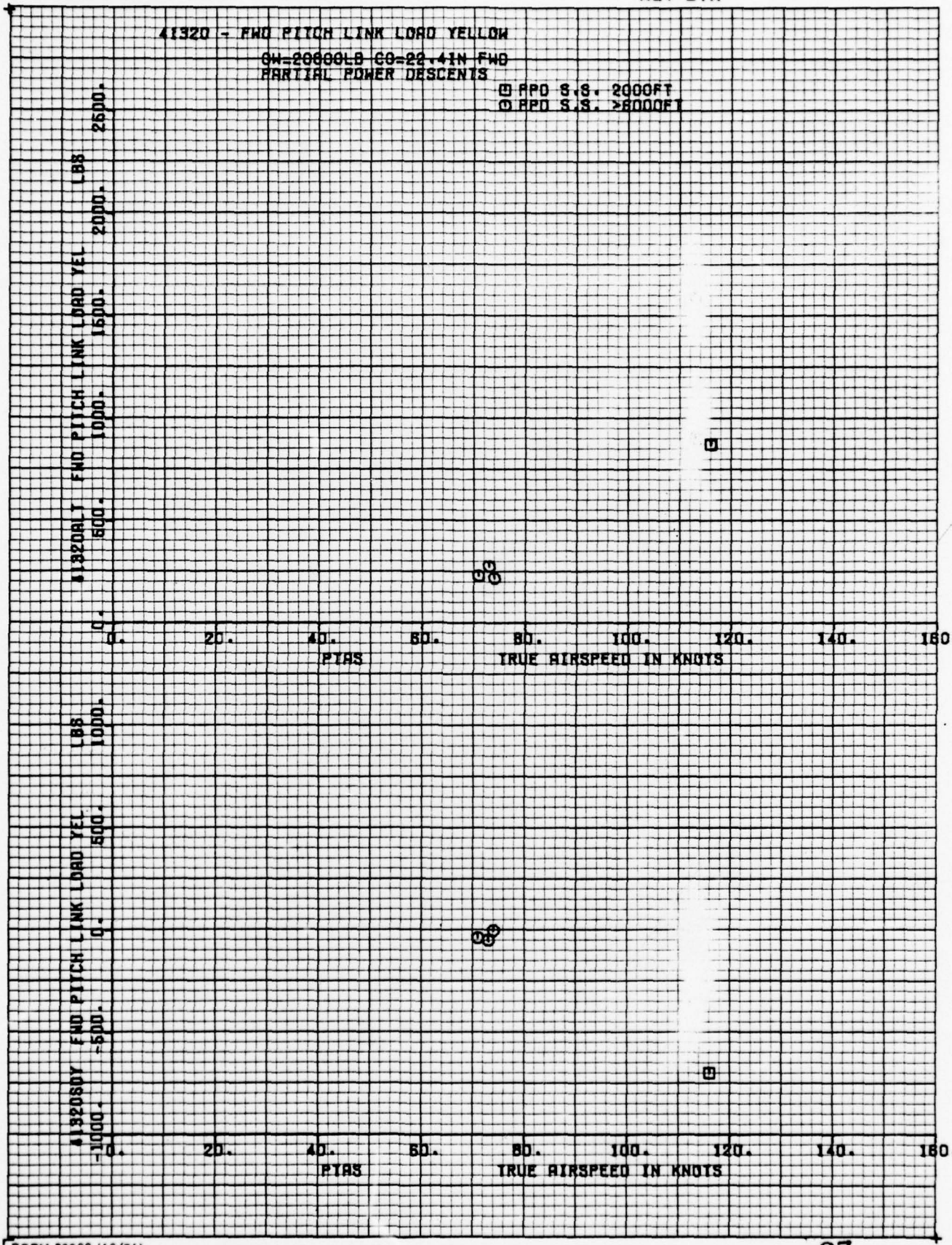

41320 - FWD PITCH LINK LOAD YELLOW
GW=20000LB CG=22.4IN FWD RPM=264
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
4132DALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS
4132DSDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS

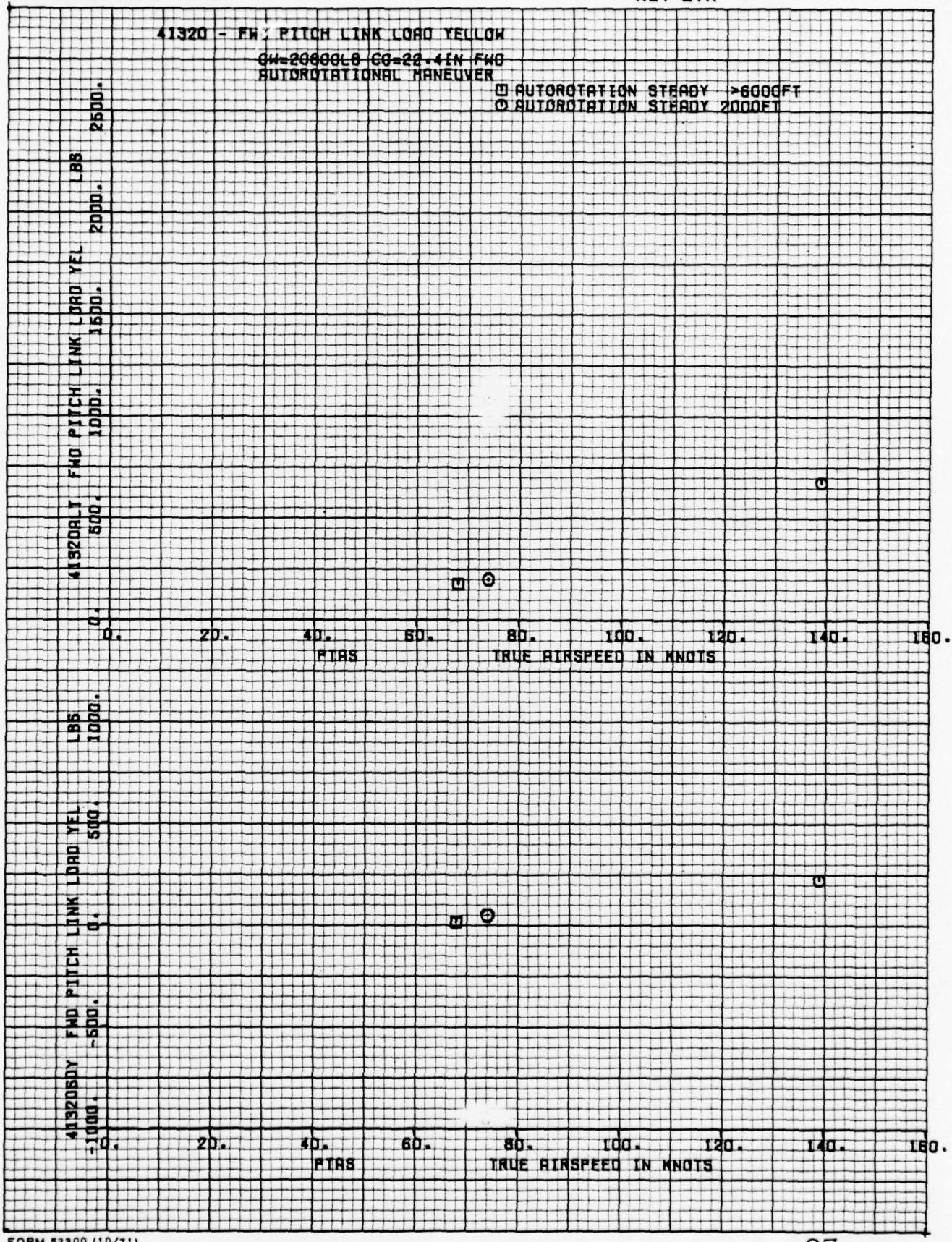

41320 - FWD PITCH LINK LOAD YELLOW
GW=20600LB CG=22.4IN FWD
POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LONG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
41320ALT FWD PITCH LINK LOAD YEL LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41320SDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

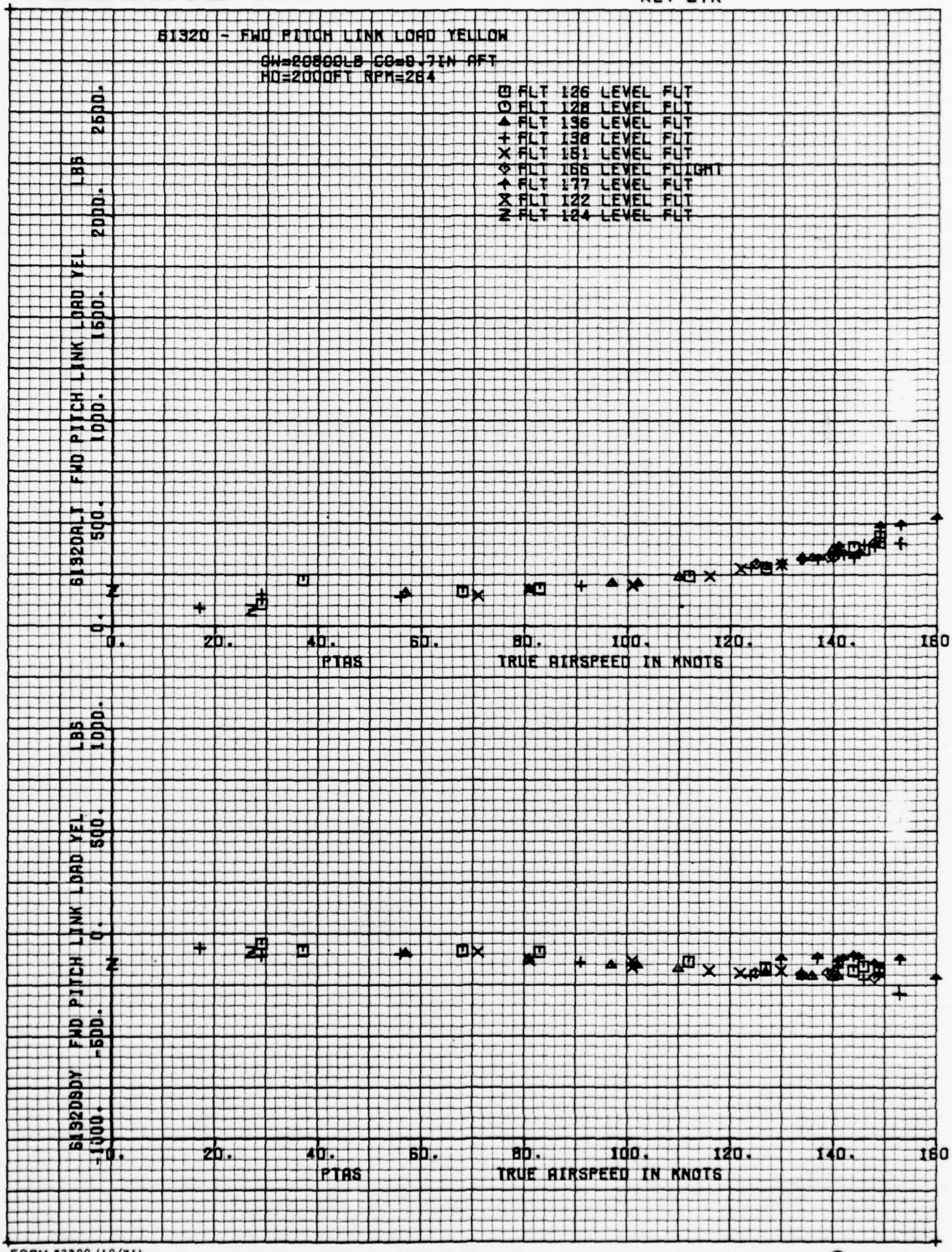


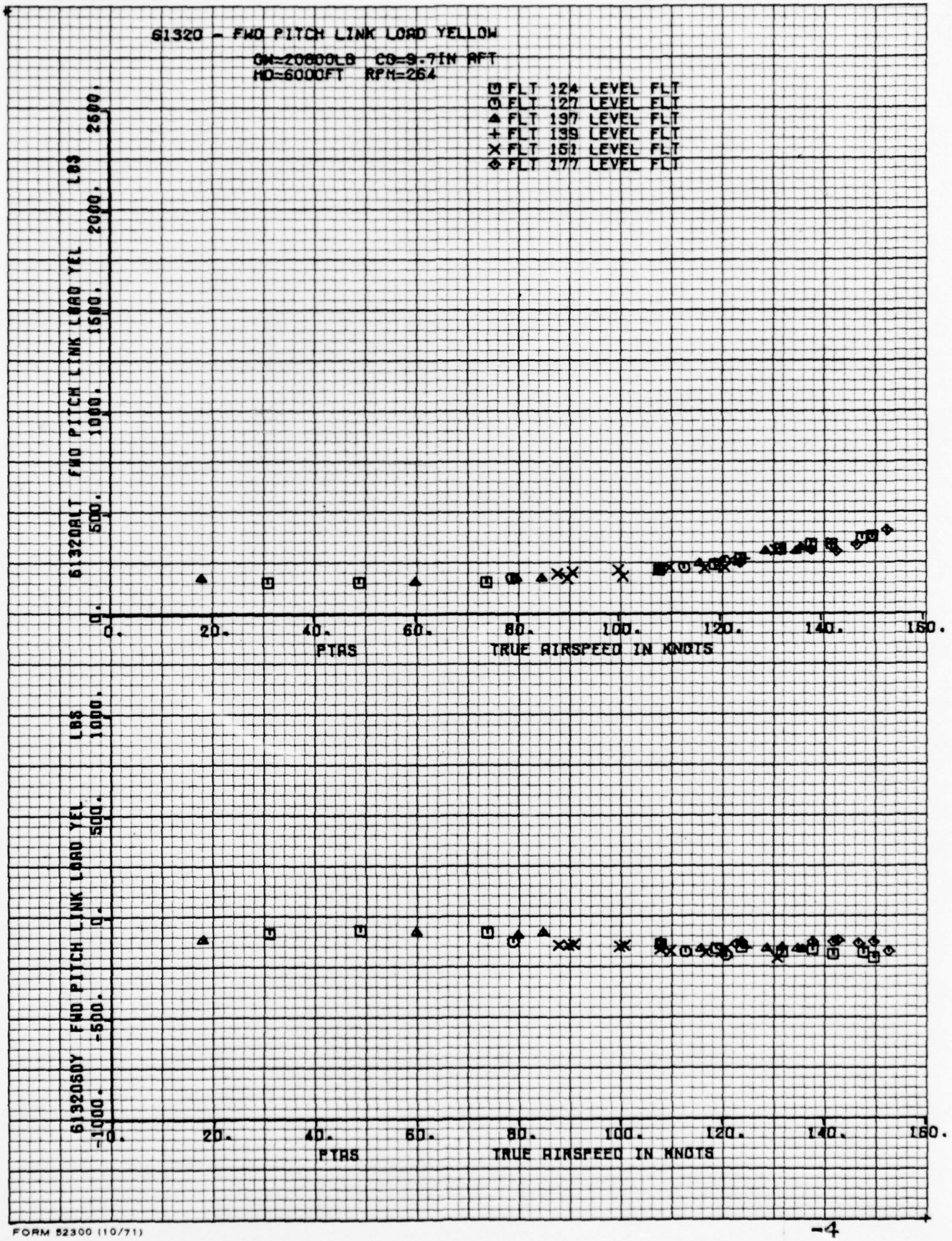
FORM 52300 (10/71)

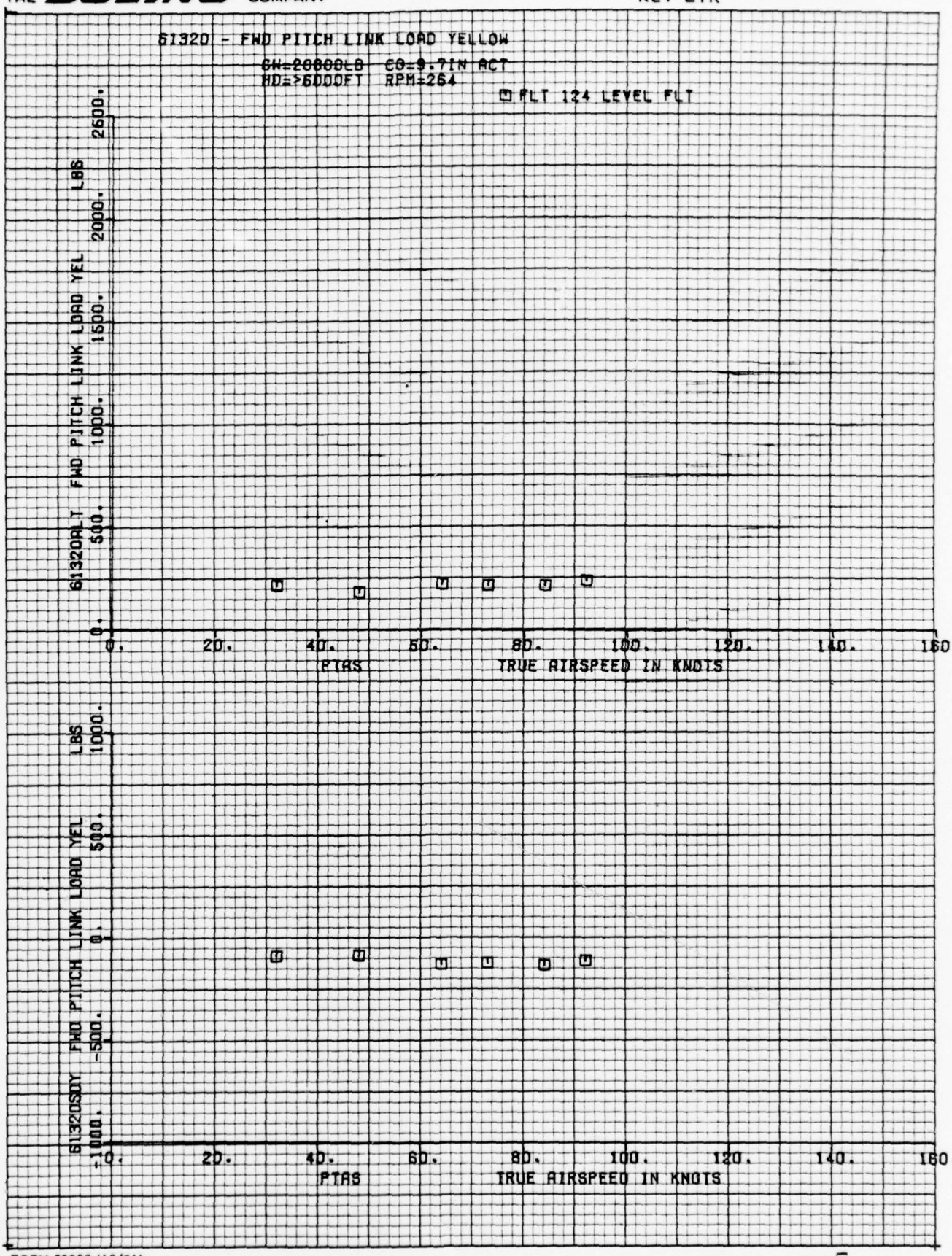
SHEET 61


41320 - FWD PITCH LINK LOAD YELLOW
GW=20000LB CG=22.41IN FWD
PARTIAL POWER DESCENTS
APD S.S. 2000FT
APD S.S. >8000FT
41320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
41320SDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS

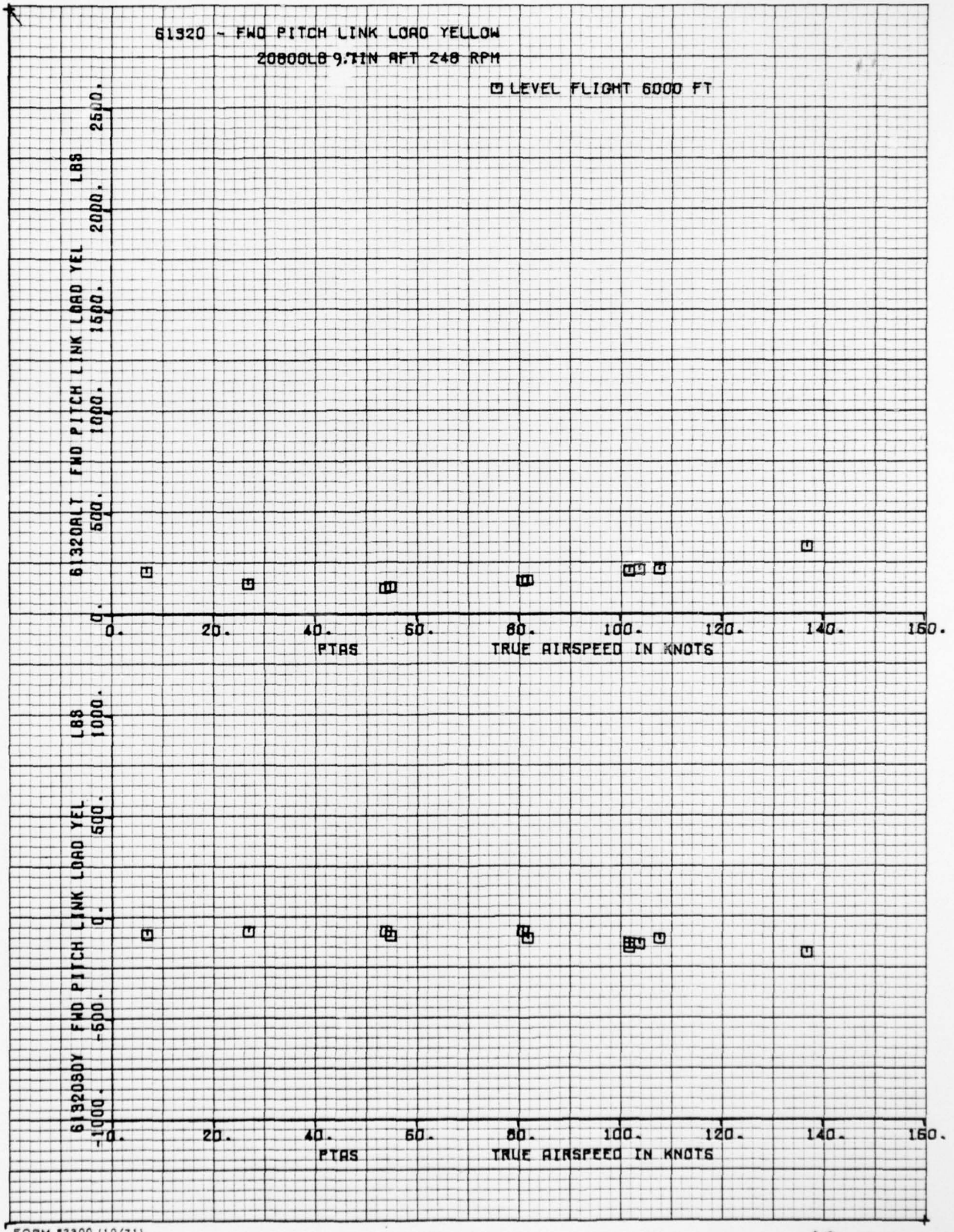

41320 - FW; PITCH LINK LOAD YELLOW
GW=20000LB CG=22.4IN FWD
AUTOROTATIONAL MANEUVER
B AUTOROTATION STEADY >6000FT
C AUTOROTATION STEADY 2000FT
41320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
41320BDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS


61320 - FWD PITCH LINK LOAD YELLOW
GW=20800LB CG=8.7IN AFT
HD=2000FT RPM=264
FLT 126 LEVEL FLT
FLT 128 LEVEL FLT
FLT 136 LEVEL FLT
FLT 138 LEVEL FLT
FLT 151 LEVEL FLT
FLT 166 LEVEL FLIGHT
FLT 177 LEVEL FLT
FLT 122 LEVEL FLT
FLT 124 LEVEL FLT
61320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
61320BDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


61320 - FWD PITCH LINK LOAD YELLOW
GW=206000LB CG=9.7IN AFT
HD=6000FT RPM=264
FLT 124 LEVEL FLT
FLT 127 LEVEL FLT
FLT 137 LEVEL FLT
FLT 139 LEVEL FLT
FLT 151 LEVEL FLT
FLT 177 LEVEL FLT
61320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
61320SDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
-0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

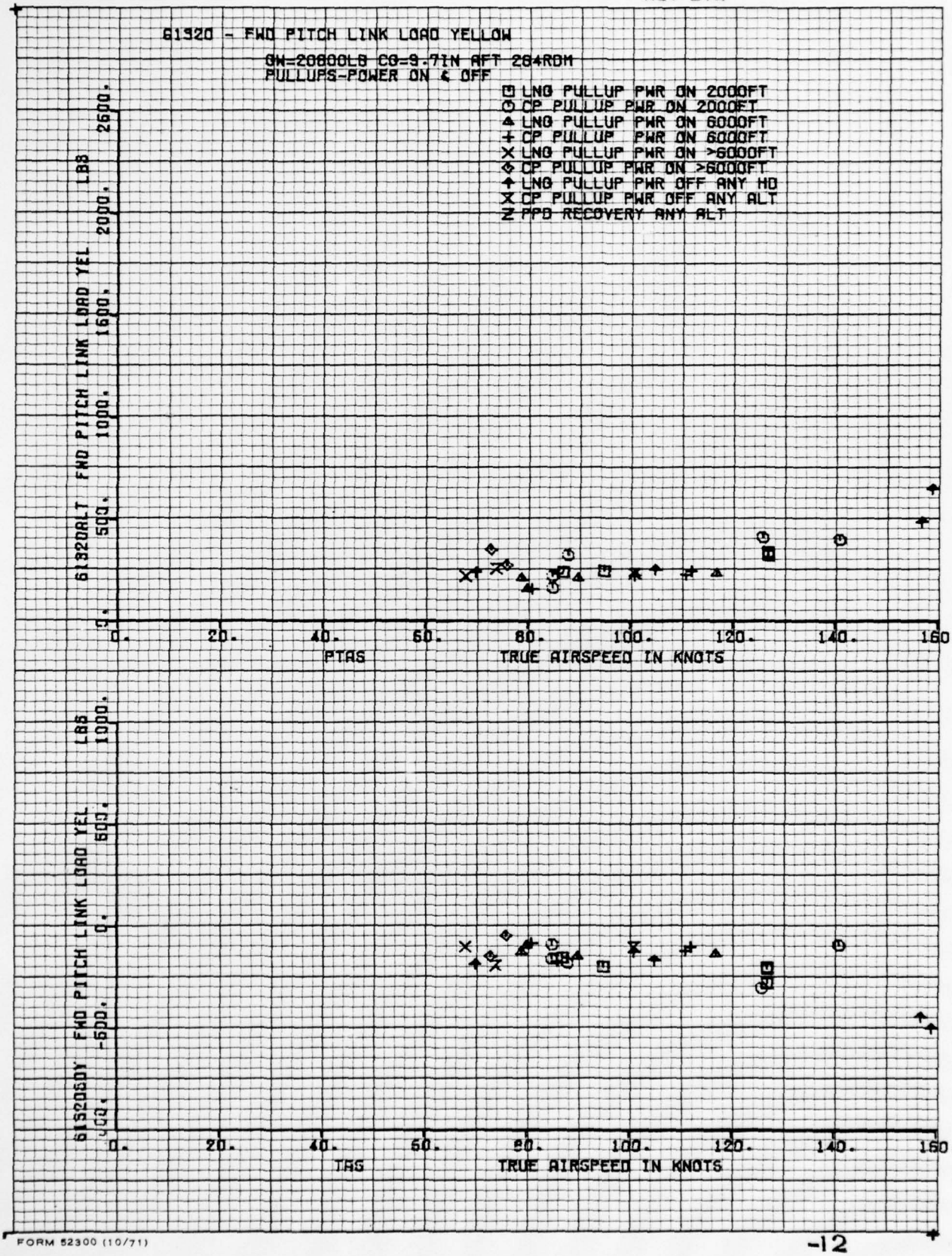

61320 - FWD PITCH LINK LOAD YELLOW
GW=20000LB CG=9.7IN ACT
HD=>5000FT RPM=264
FLT 124 LEVEL FLT
61320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
61320SDIY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



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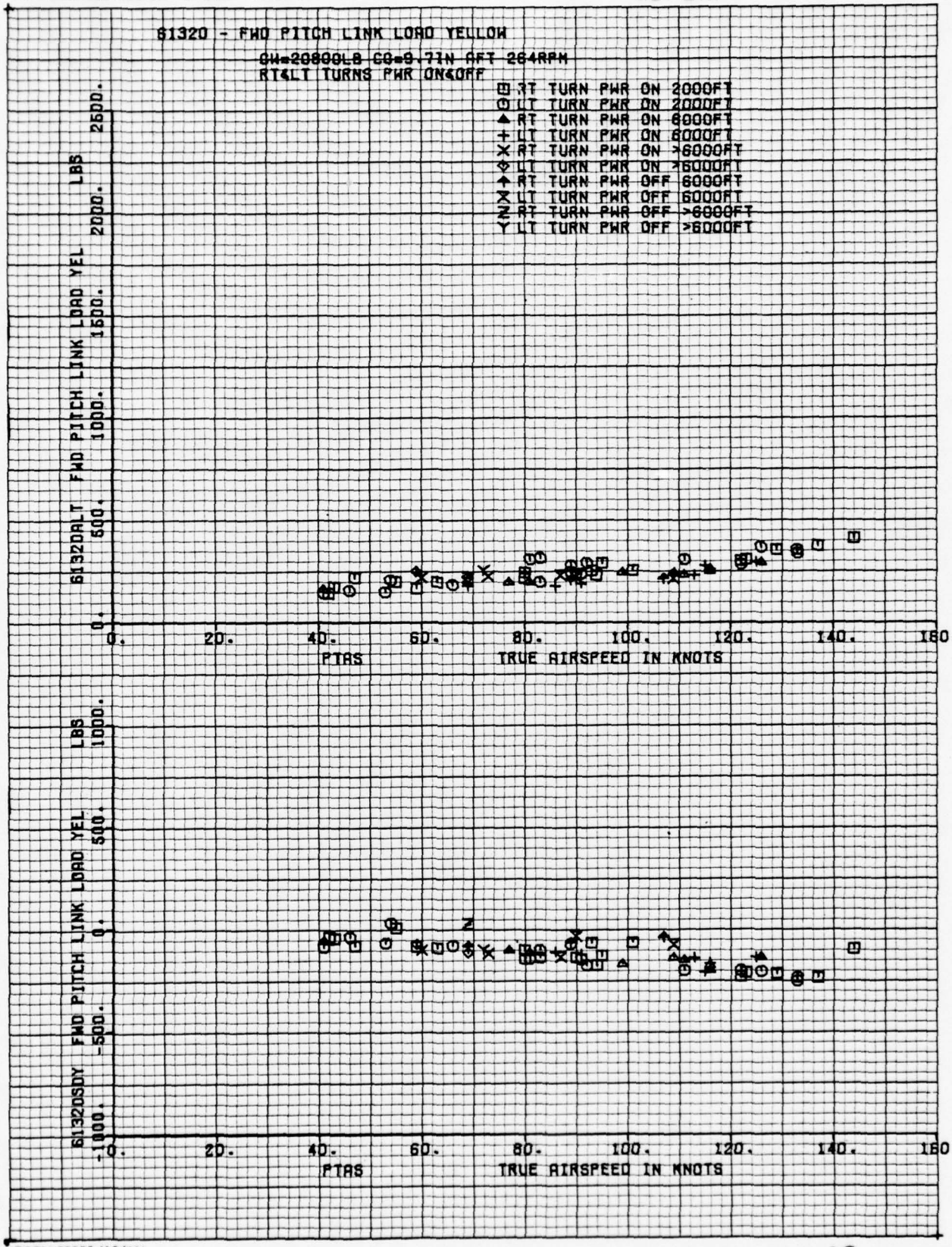
THE BOEING COMPANY

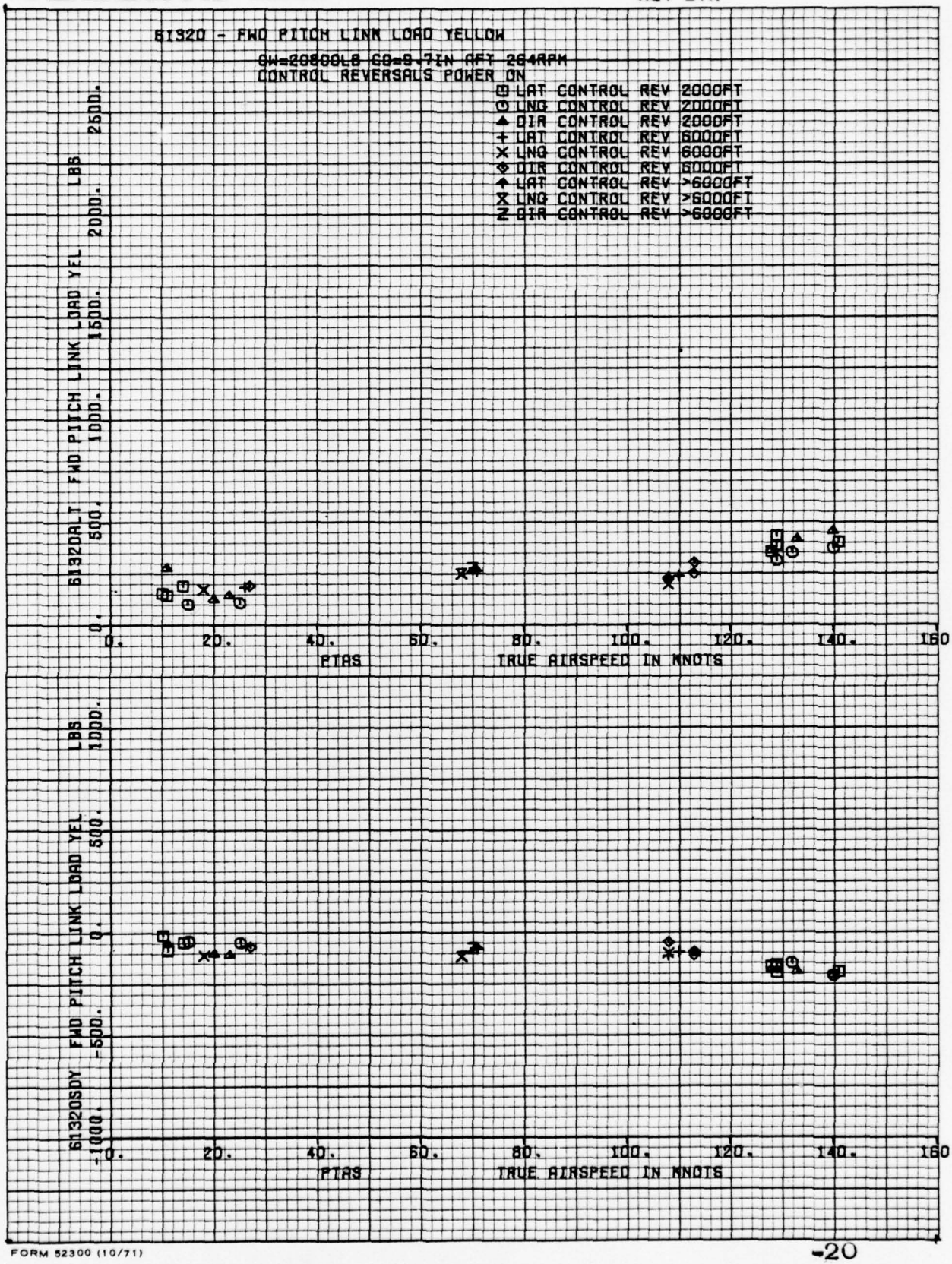


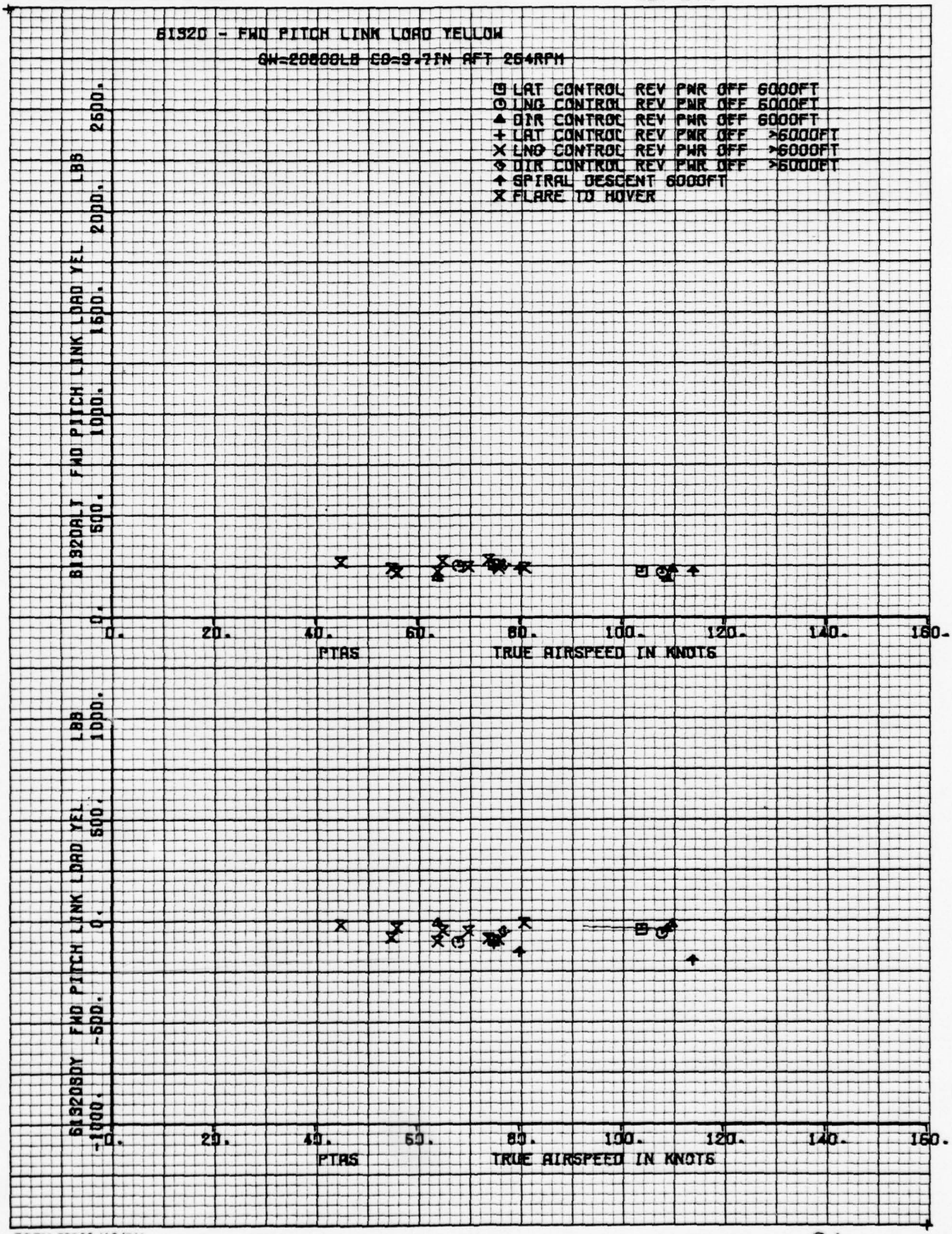
FORM 52300 (10/71)

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SHEET 68

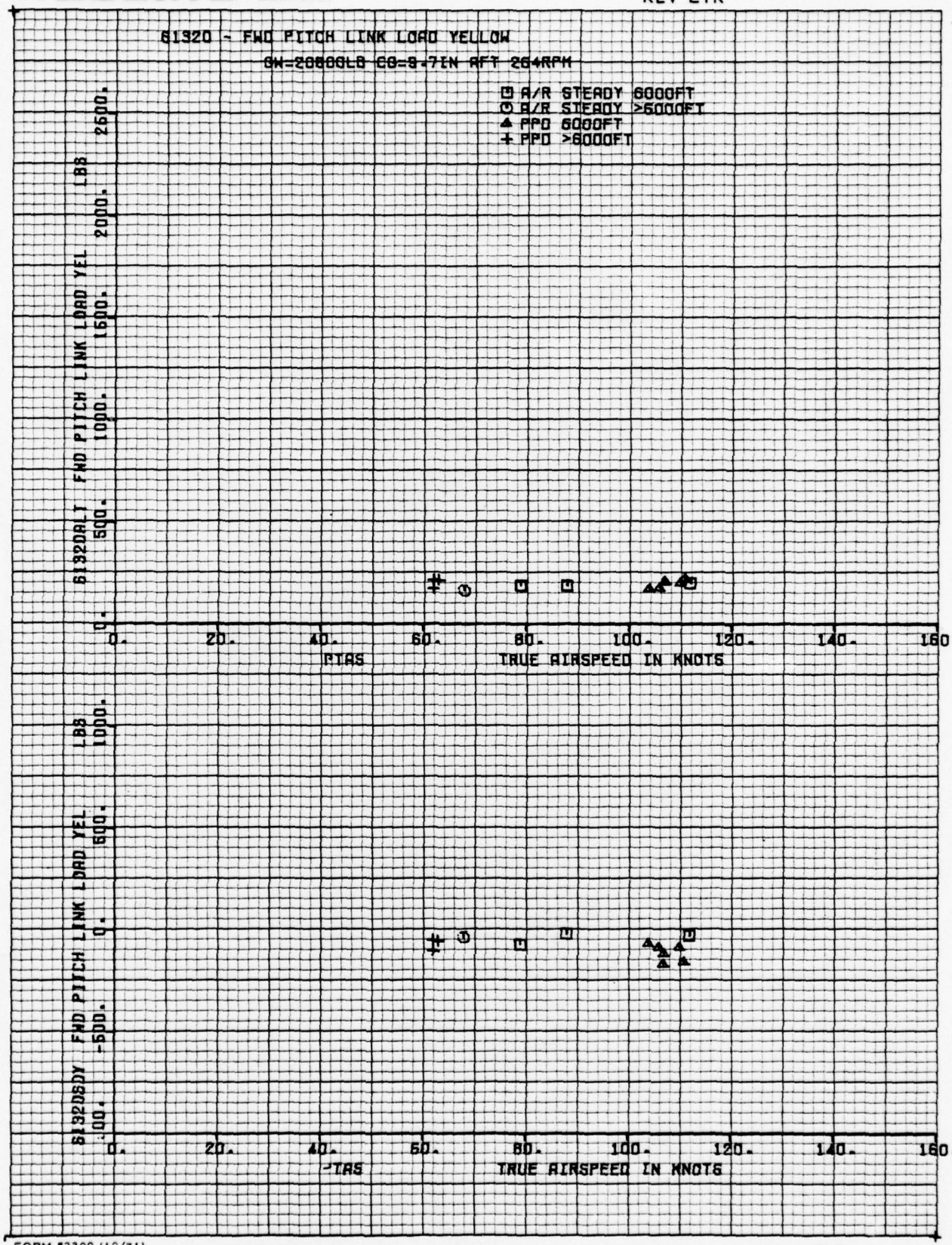

61320 - FWD PITCH LINK LOAD YELLOW
GW=20800LB CG=9.7IN AFT 264RPM
RT&LT TURNS PWR ON&OFF
⊞ RT TURN PWR ON 2000FT
⊙ LT TURN PWR ON 2000FT
▲ RT TURN PWR ON 6000FT
+ LT TURN PWR ON 6000FT
X RT TURN PWR ON >6000FT
◈ LT TURN PWR ON >6000FT
✦ RT TURN PWR OFF 6000FT
⋈ LT TURN PWR OFF 6000FT
Z RT TURN PWR OFF >6000FT
Y LT TURN PWR OFF >6000FT
6132DALT FWD PITCH LINK LOAD YEL LBS
2600.
2000.
1600.
1000.
600.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS
6132DSDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS


61320 - FWD PITCH LINK LOAD YELLOW
GW=20800LB CG=9.7IN AFT 264RPM
CONTROL REVERSALS POWER ON
LAT CONTROL REV 2000FT
LNG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LNG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LNG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
61320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
61320SDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS



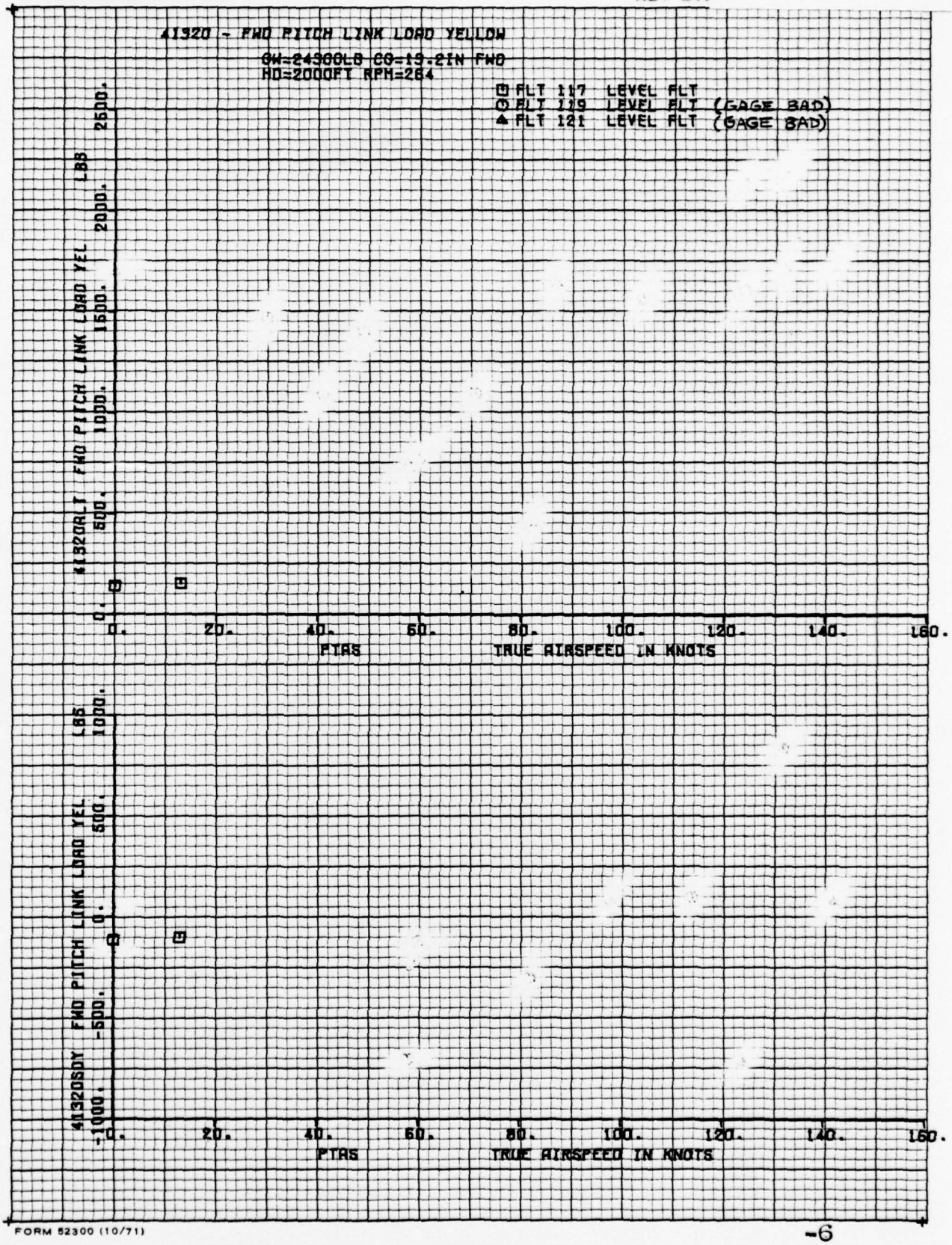
FORM 52300 (10/71)

SHEET 71


61320 - FWD PITCH LINK LOAD YELLOW
GW=20000LB CG=9.7IN AFT 264RPM
A/R STEADY 6000FT
A/R STEADY >6000FT
PPO 6000FT
PPO >6000FT
61320ALT FWD PITCH LINK LOAD YEL LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
61320DSDY FWD PITCH LINK LOAD YEL LBS
1000.
600.
0.
-500.
-100.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

NUMBER
REV LTI

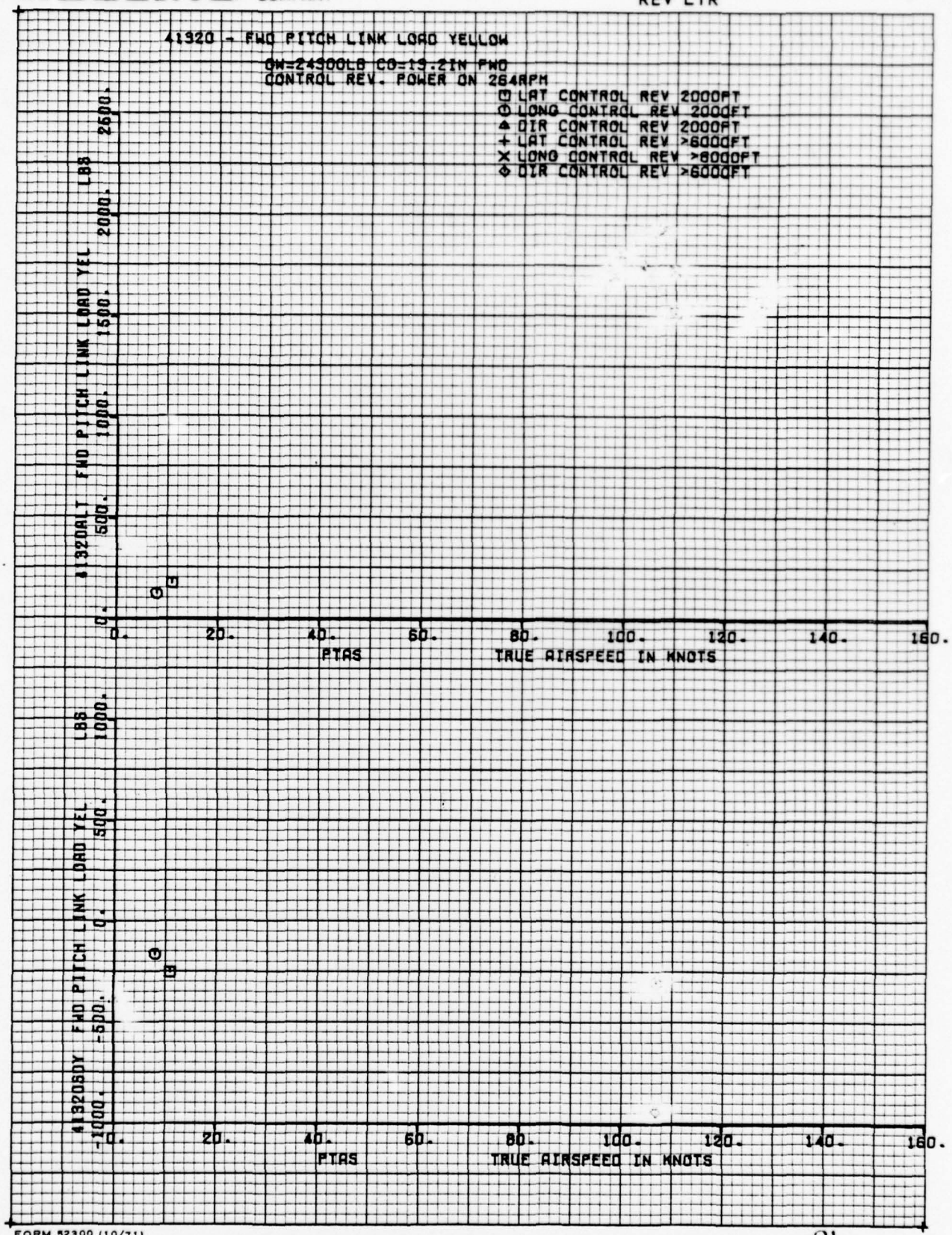


FORM 52300 (10/71)

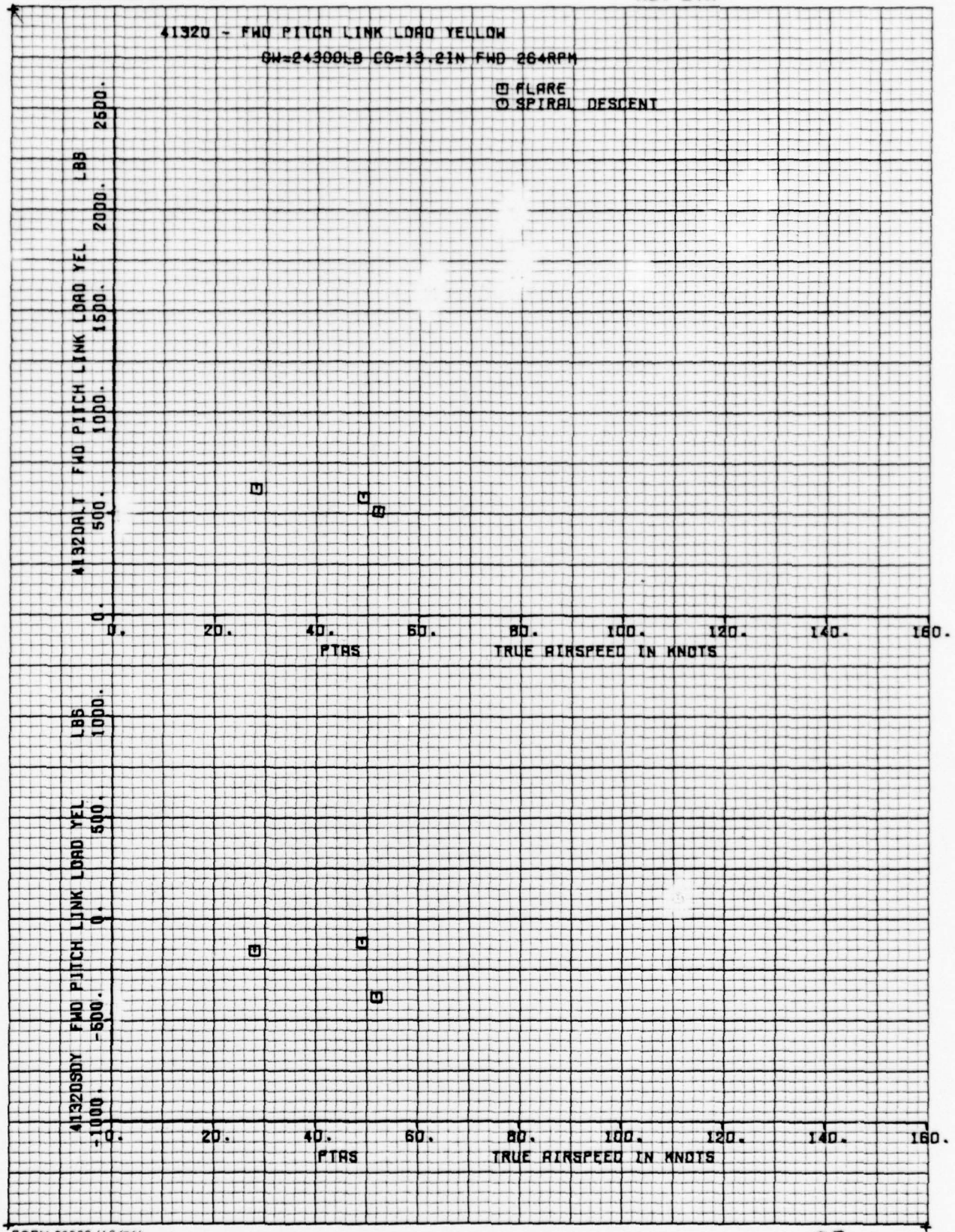
-6

SHEET 73

THE BOEING COMPANY

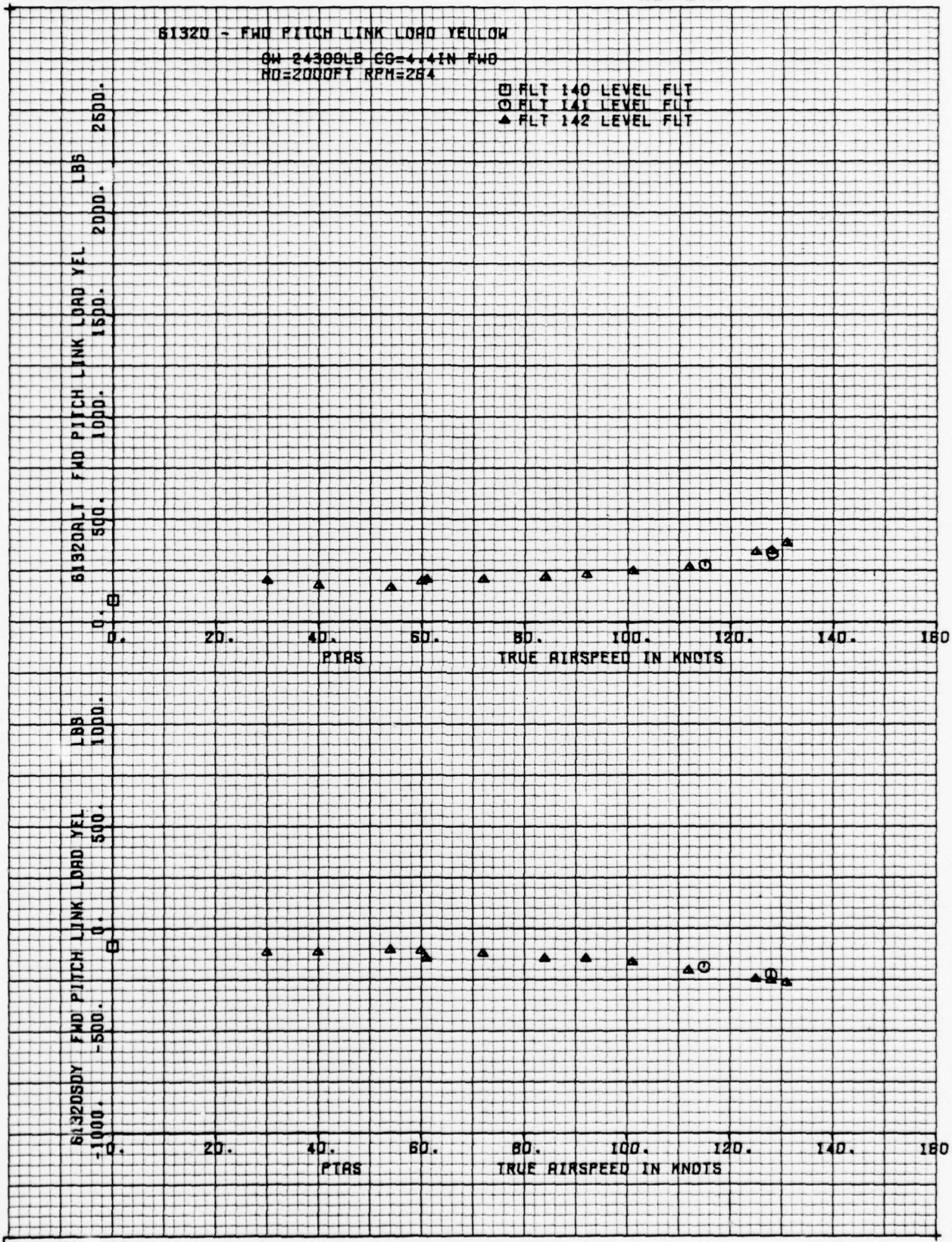


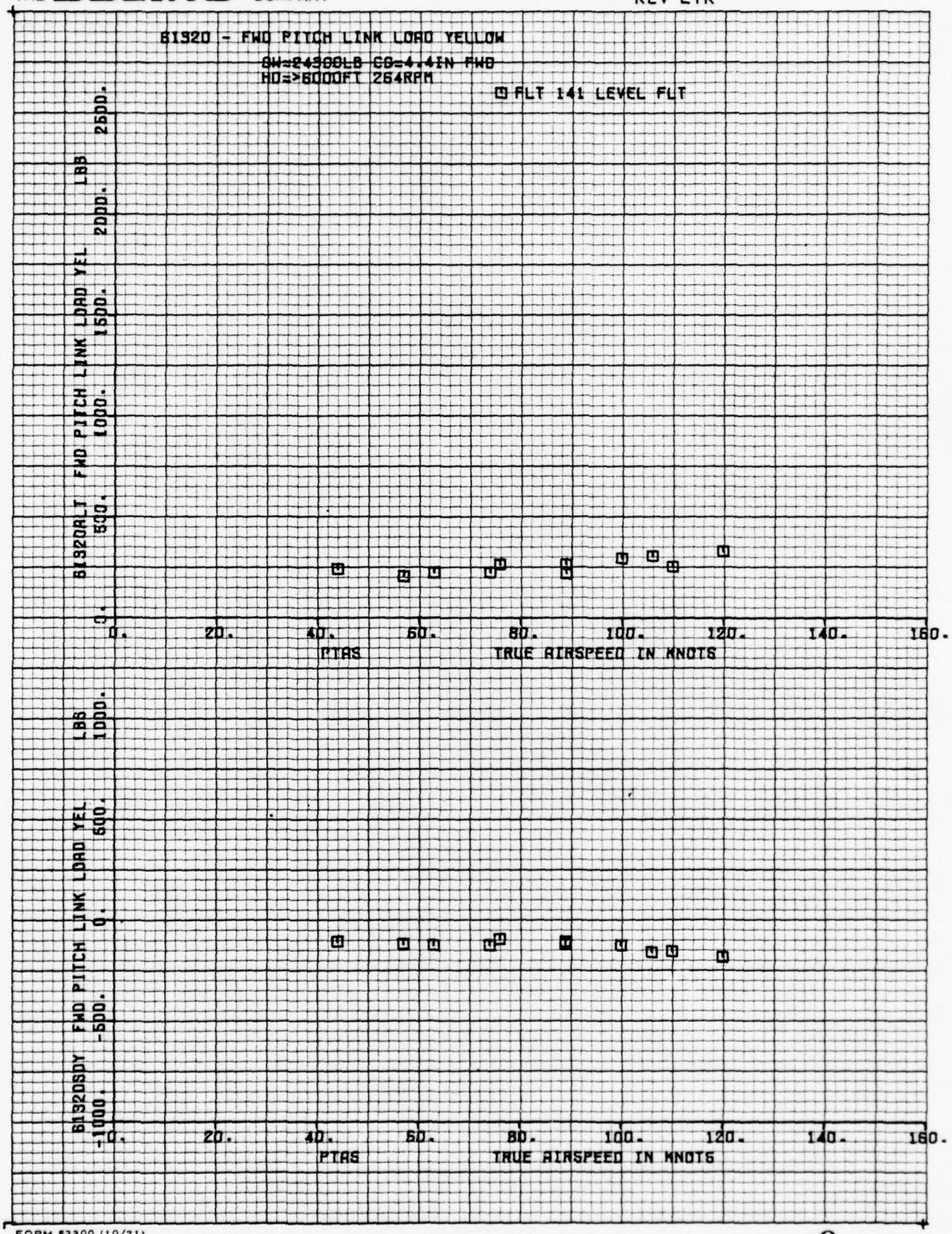
FORM 52300 (10/71)


41320 - FWD PITCH LINK LOAD YELLOW
GW=24300LB CG=13.21N FWD 264RPM
① FLARE
② SPIRAL DESCENT
41320ALT FWD PITCH LINK LOAD YEL LBS
0.
500.
1000.
1500.
2000.
2500.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41320SDY FWD PITCH LINK LOAD YEL LBS
-1000.
-500.
0.
500.
1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

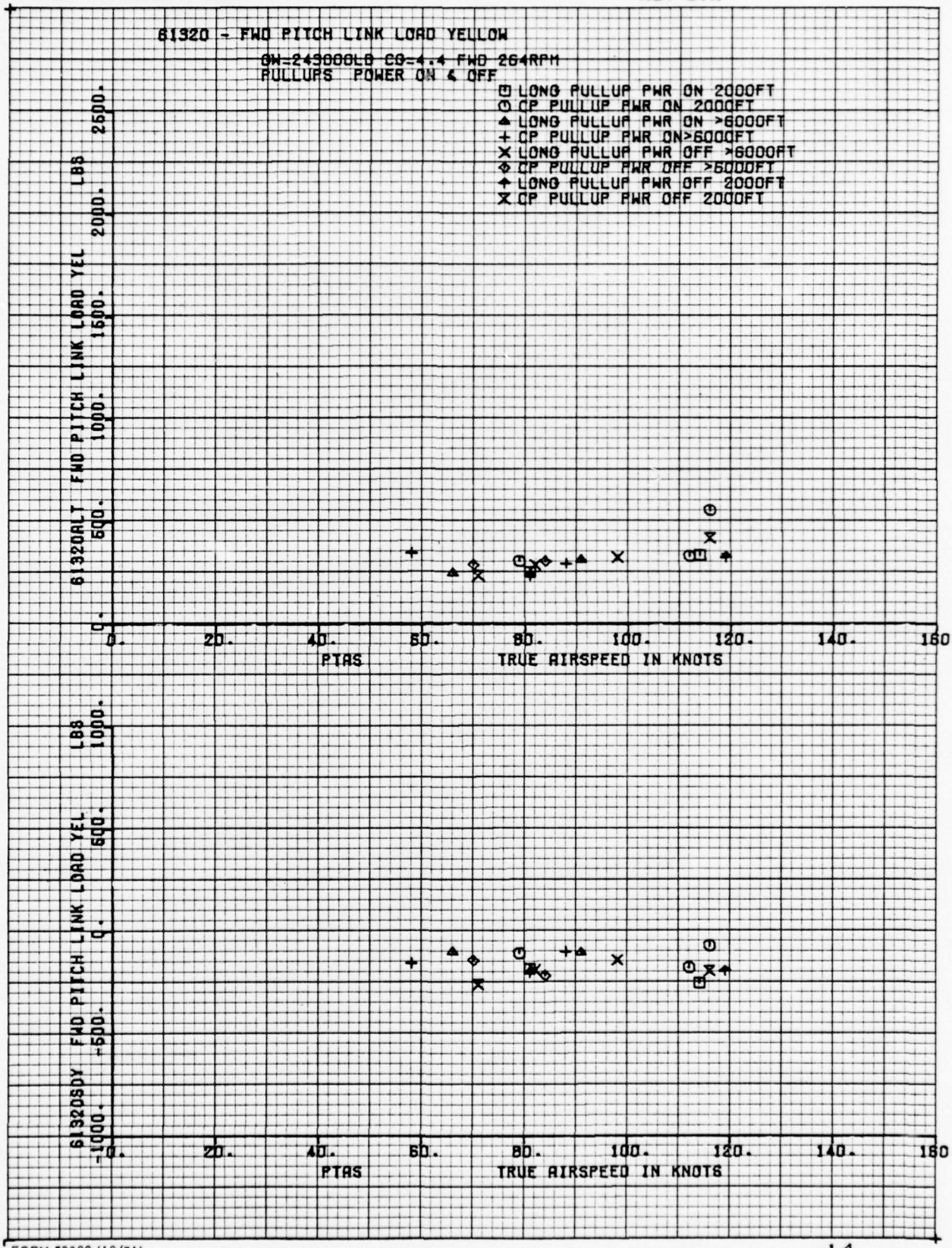
41320 - FWD PITCH LINK LOAD YELLOW

GAGE INOPERATIVE


61320 - FWD PITCH LINK LOAD YELLOW
GW 24300LB CG=4.4IN FWD
HD=2000FT RPM=264
FLT 140 LEVEL FLT
FLT 141 LEVEL FLT
FLT 142 LEVEL FLT
61320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
61320DSDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS


61320 - FWD PITCH LINK LOAD YELLOW
GW=24300LB CG=4.4IN FWD
HO=>6000FT 264RPM
FLT 141 LEVEL FLT
61320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
61320SDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

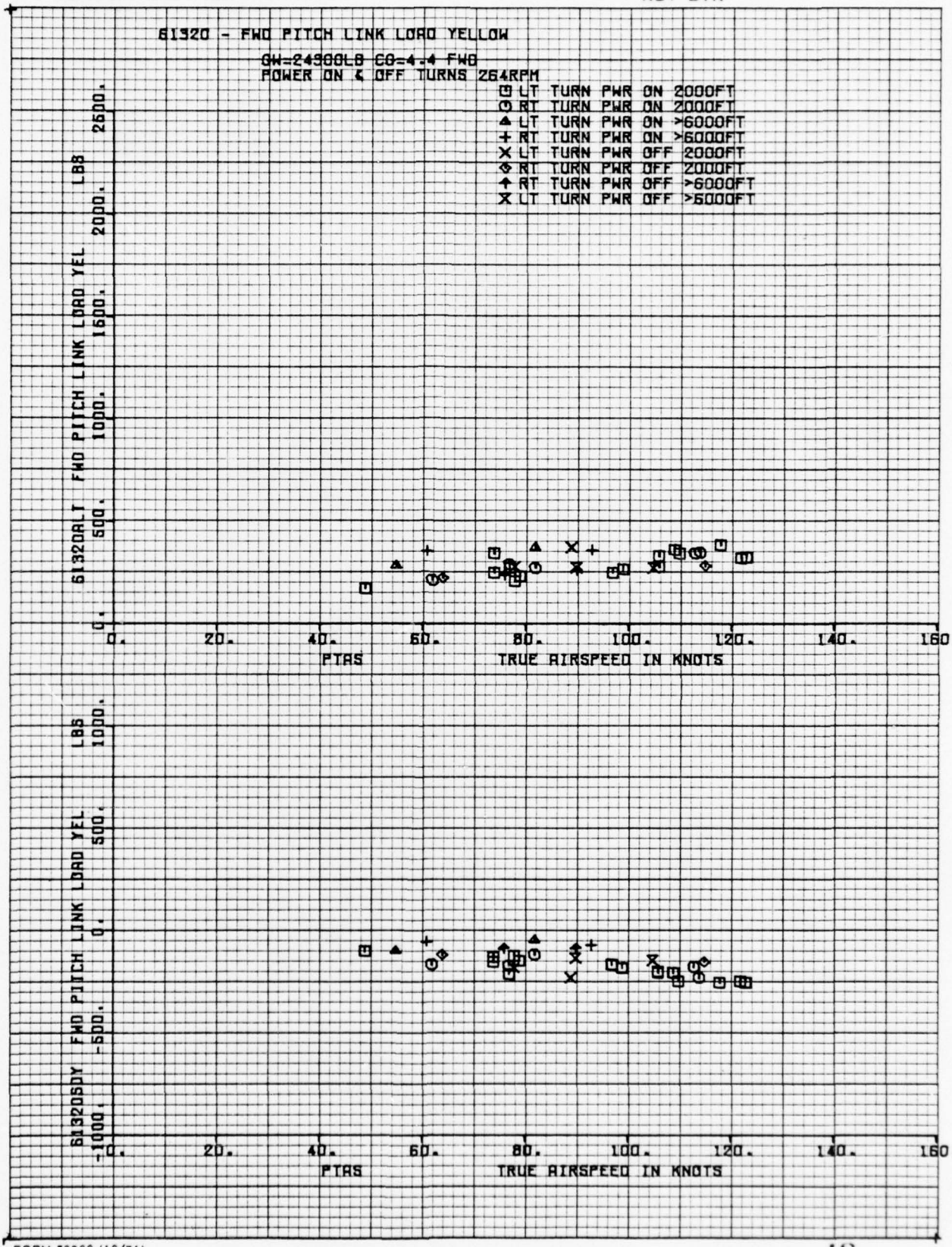
THE BOEING COMPANY



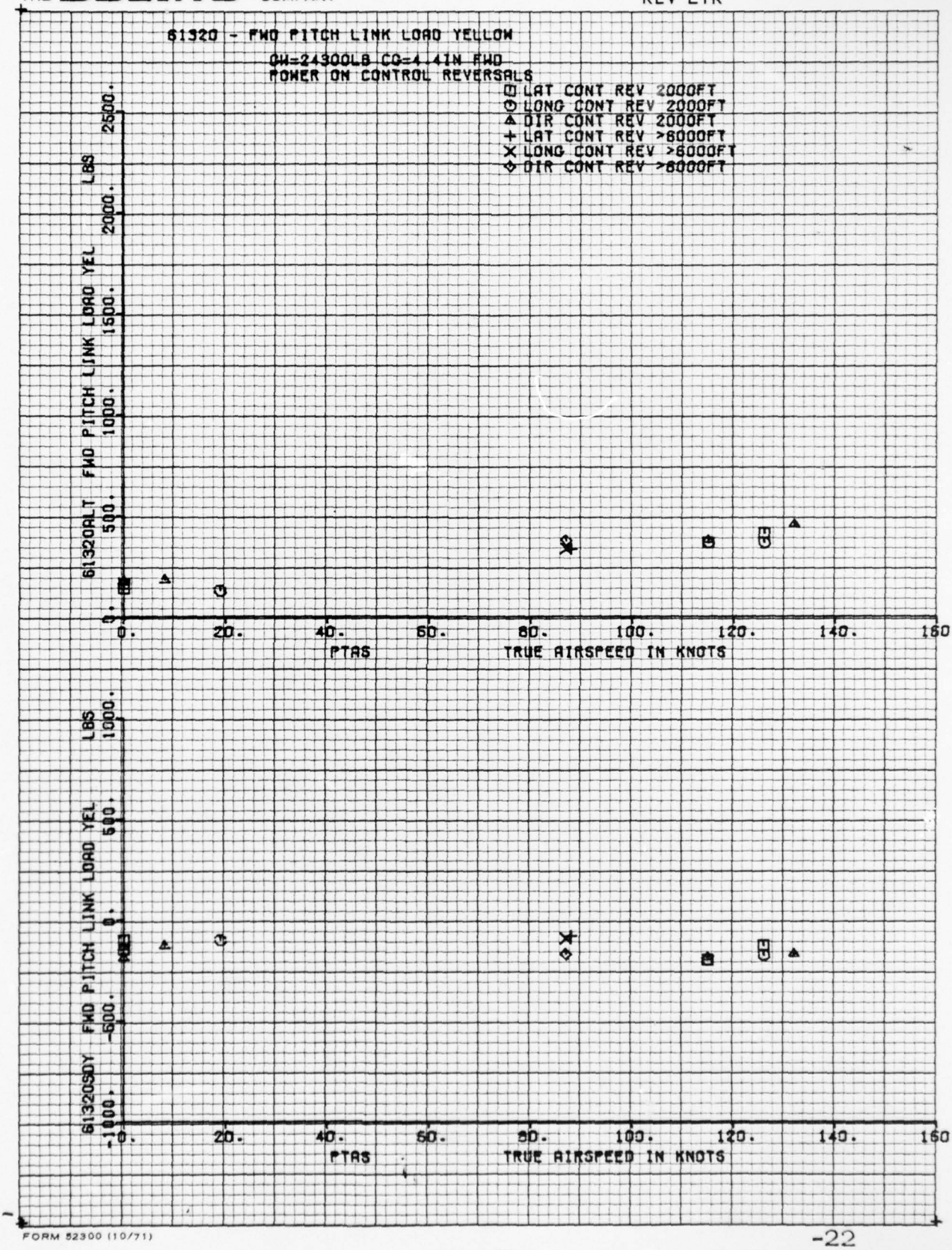
FORM 52300 (10/71)

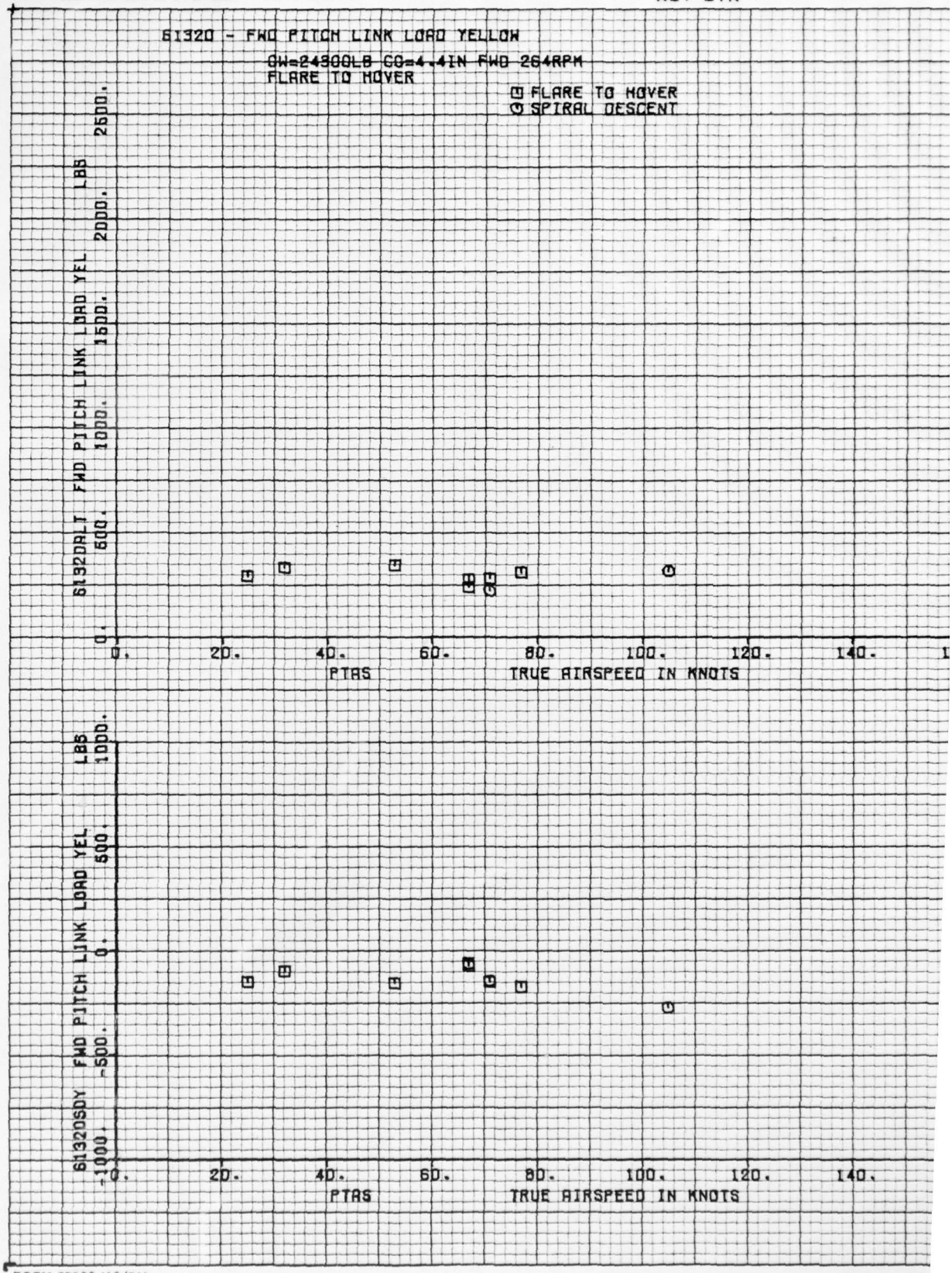
SHEET 86

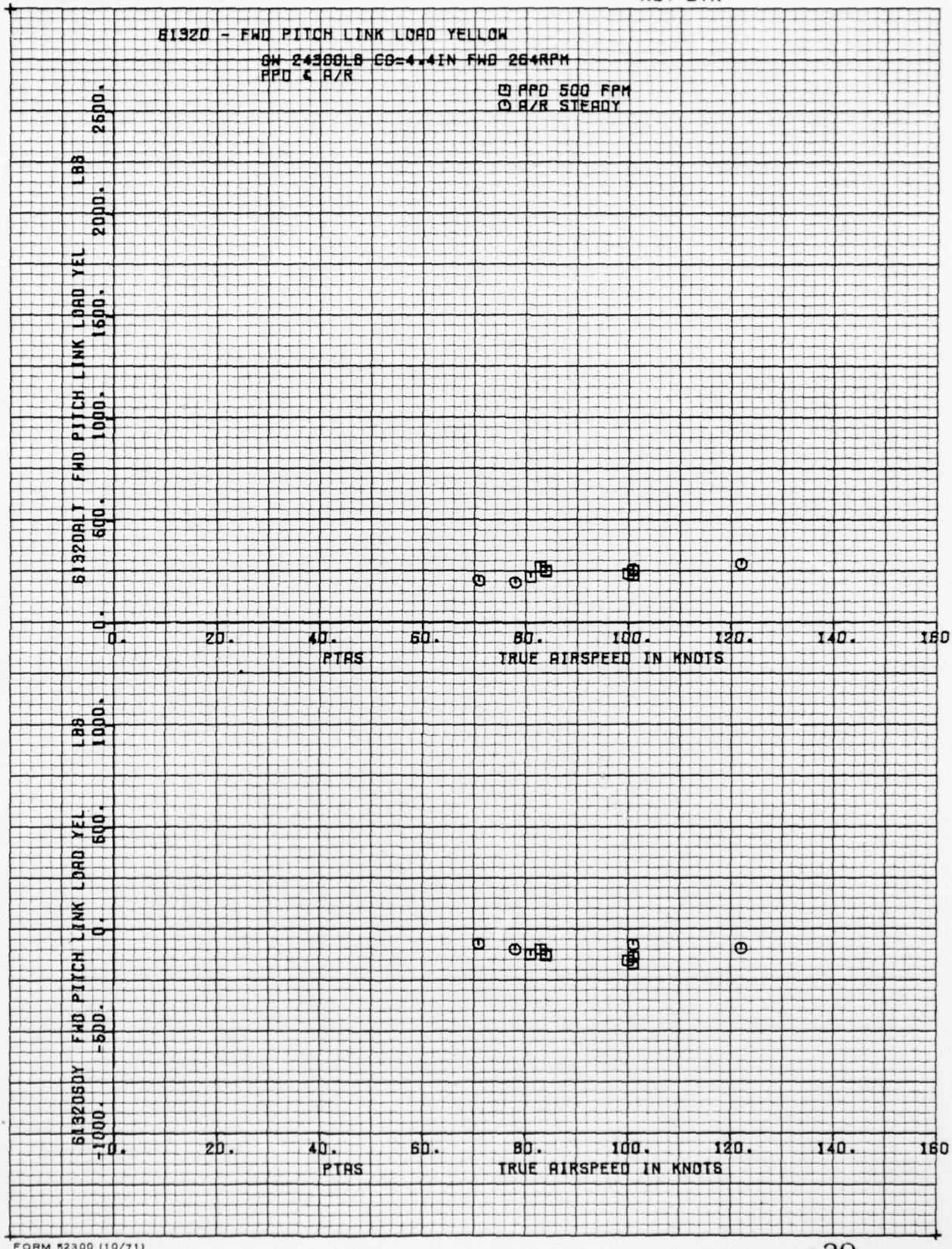
THE BOEING COMPANY

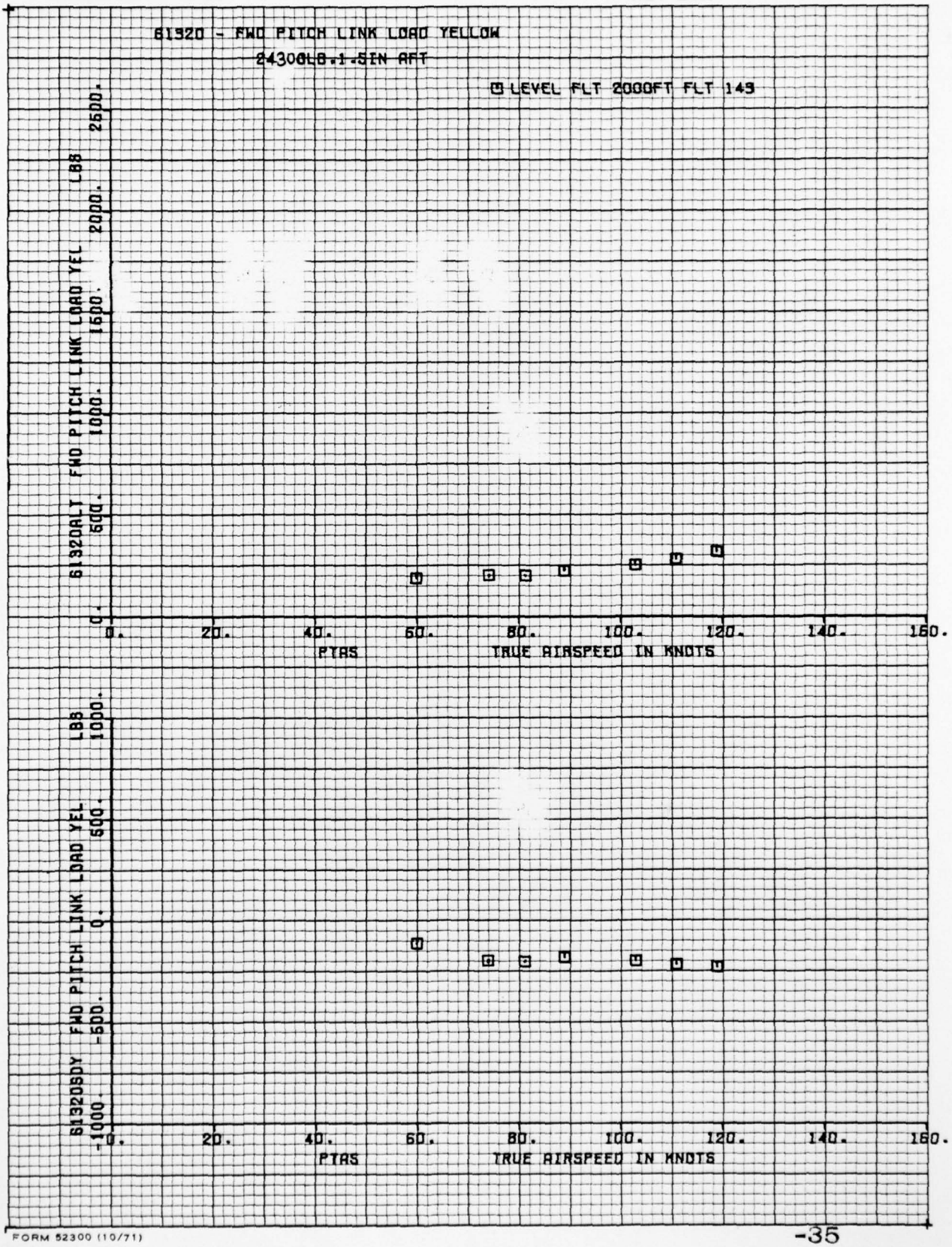


FORM 52300 (10/71)

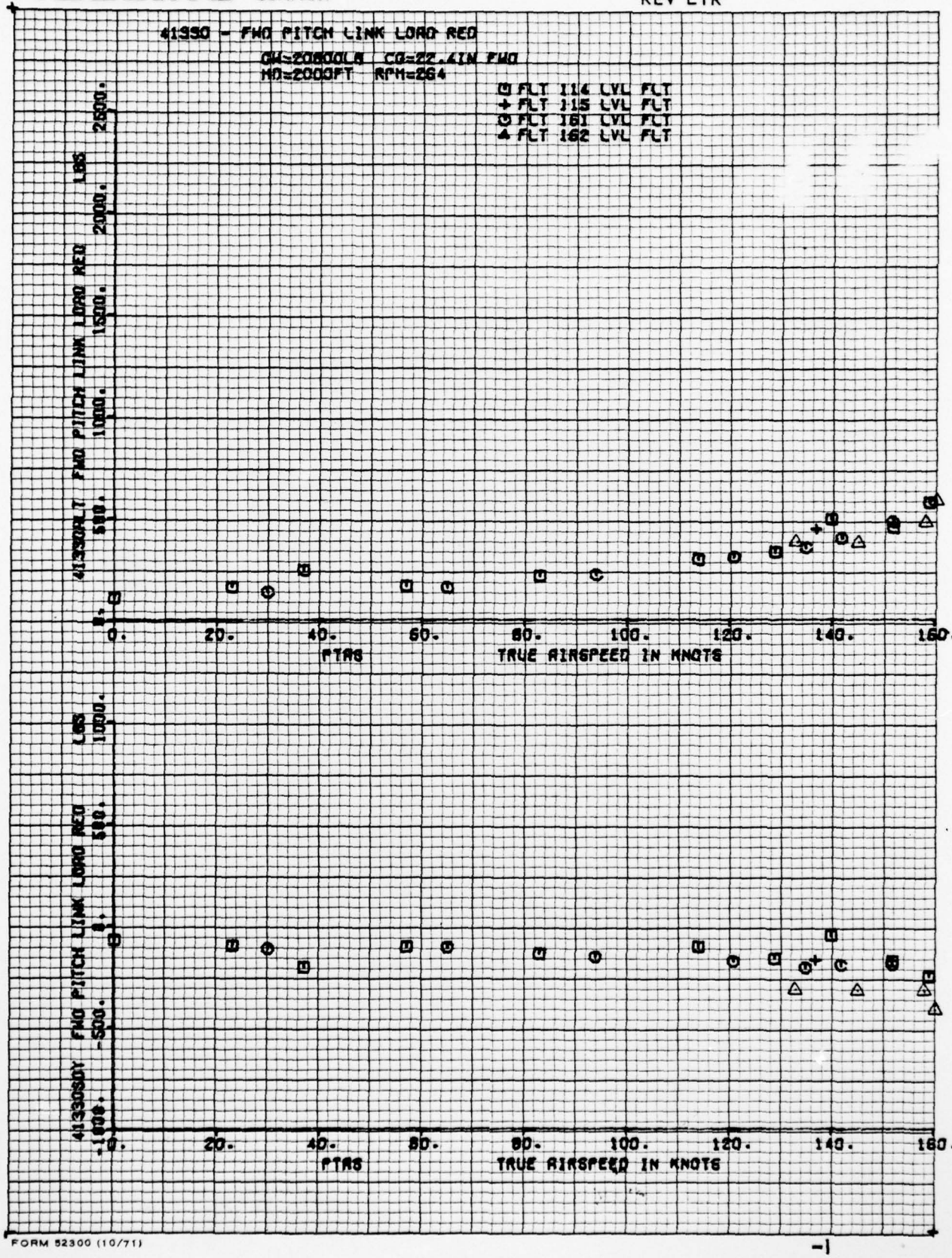

61320 - FWD PITCH LINK LOAD YELLOW
GW=24300LB CG=4.41N FWD
POWER ON CONTROL REVERSALS
LAT CONT REV 2000FT
LONG CONT REV 2000FT
DIR CONT REV 2000FT
LAT CONT REV >8000FT
LONG CONT REV >8000FT
DIR CONT REV >8000FT
61320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
61320SDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS


61320 - FWD PITCH LINK LOAD YELLOW
GW=24300LB CG=4.4IN FWD 264RPM
FLARE TO HOVER
1 FLARE TO HOVER
2 SPIRAL DESCENT
61320RLT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
PTAS
TRUE AIRSPEED IN KNOTS
61320SDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
-10.
20.
40.
60.
80.
100.
120.
140.
PTAS
TRUE AIRSPEED IN KNOTS

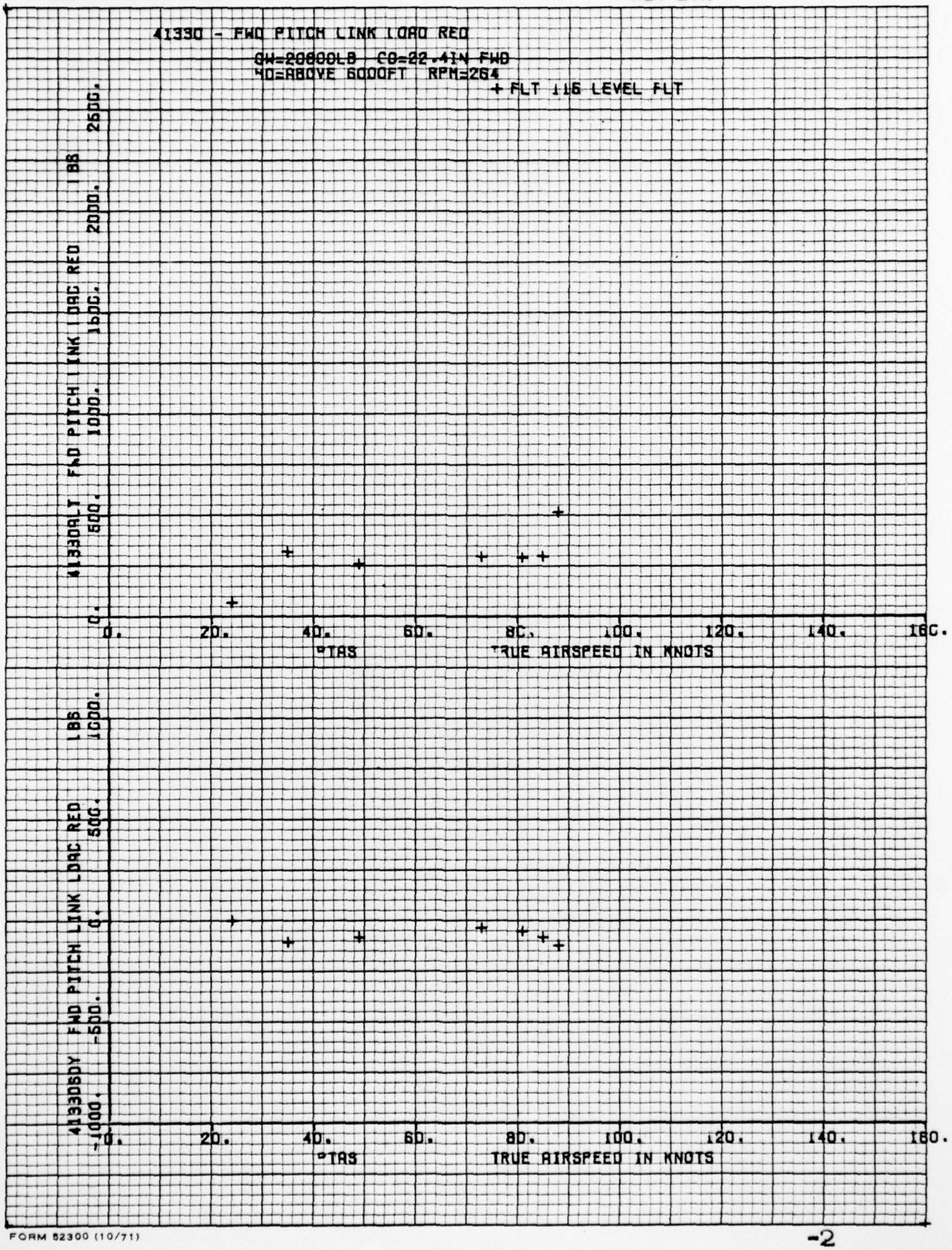

81320 - FWD PITCH LINK LOAD YELLOW
GW 24300LB CG=4.4IN FWD 264RPM
APD & A/R
APD 500 FPM
A/R STEADY
81320ALT FWD PITCH LINK LOAD YEL LBS
2600.
2000.
1600.
1000.
600.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
81320SDY FWD PITCH LINK LOAD YEL LBS
1000.
600.
0.
-600.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


61320 - FWD PITCH LINK LOAD YELLOW
2430GLS.1.SIN AFT
LEVEL FLT 2000FT FLT 143
61320ALT FWD PITCH LINK LOAD YEL LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
61320BDY FWD PITCH LINK LOAD YEL LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

4.3 Forward Pitch Link, Red Blade

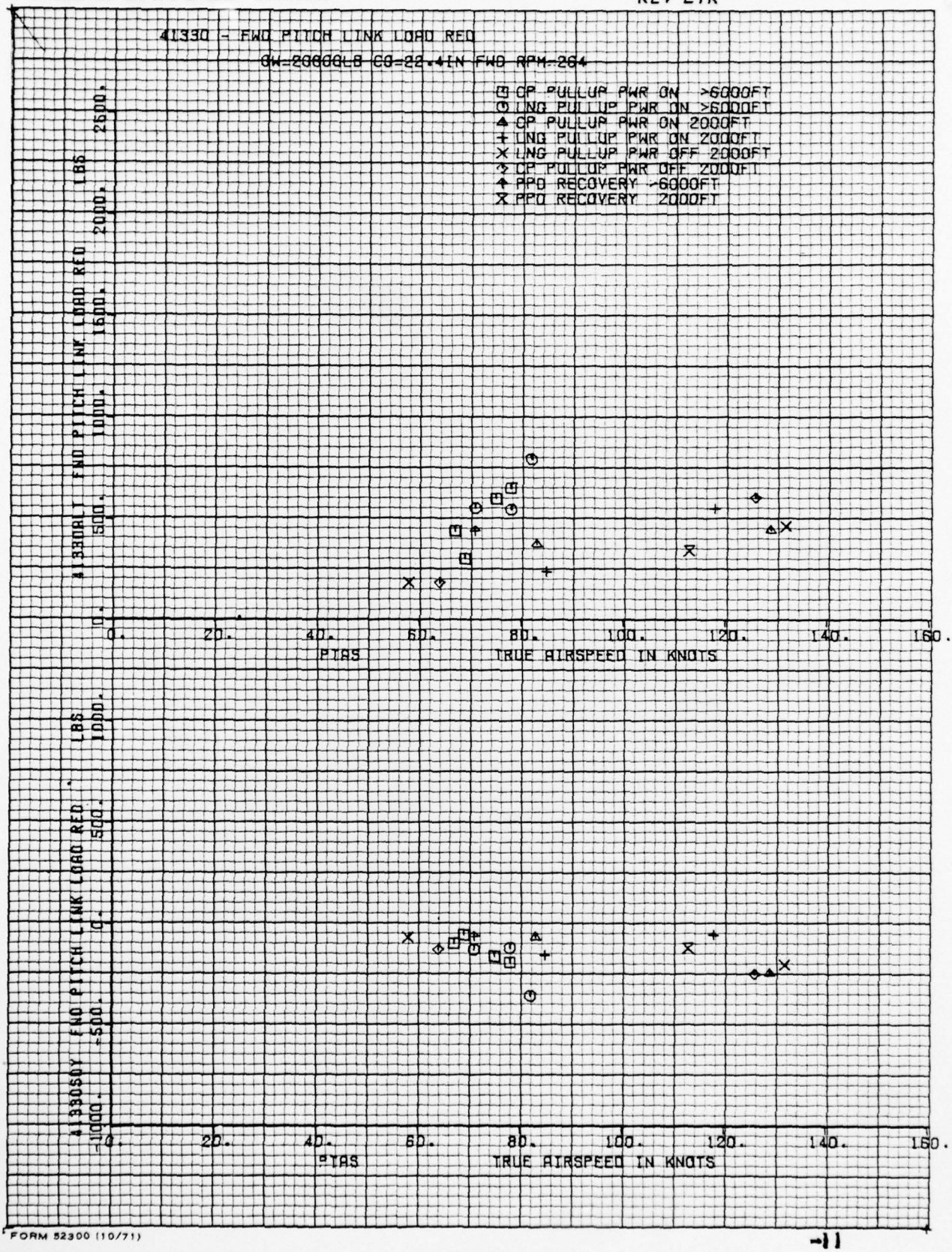

41330 - FWD PITCH LINK LOAD REQ
GW=206000LB CG=22.4IN FWD
HO=2000FT RPM=264
FLT 114 LVL FLT
FLT 115 LVL FLT
FLT 161 LVL FLT
FLT 162 LVL FLT
413301LT FWD PITCH LINK LOAD REQ LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS
413301DY FWD PITCH LINK LOAD REQ LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

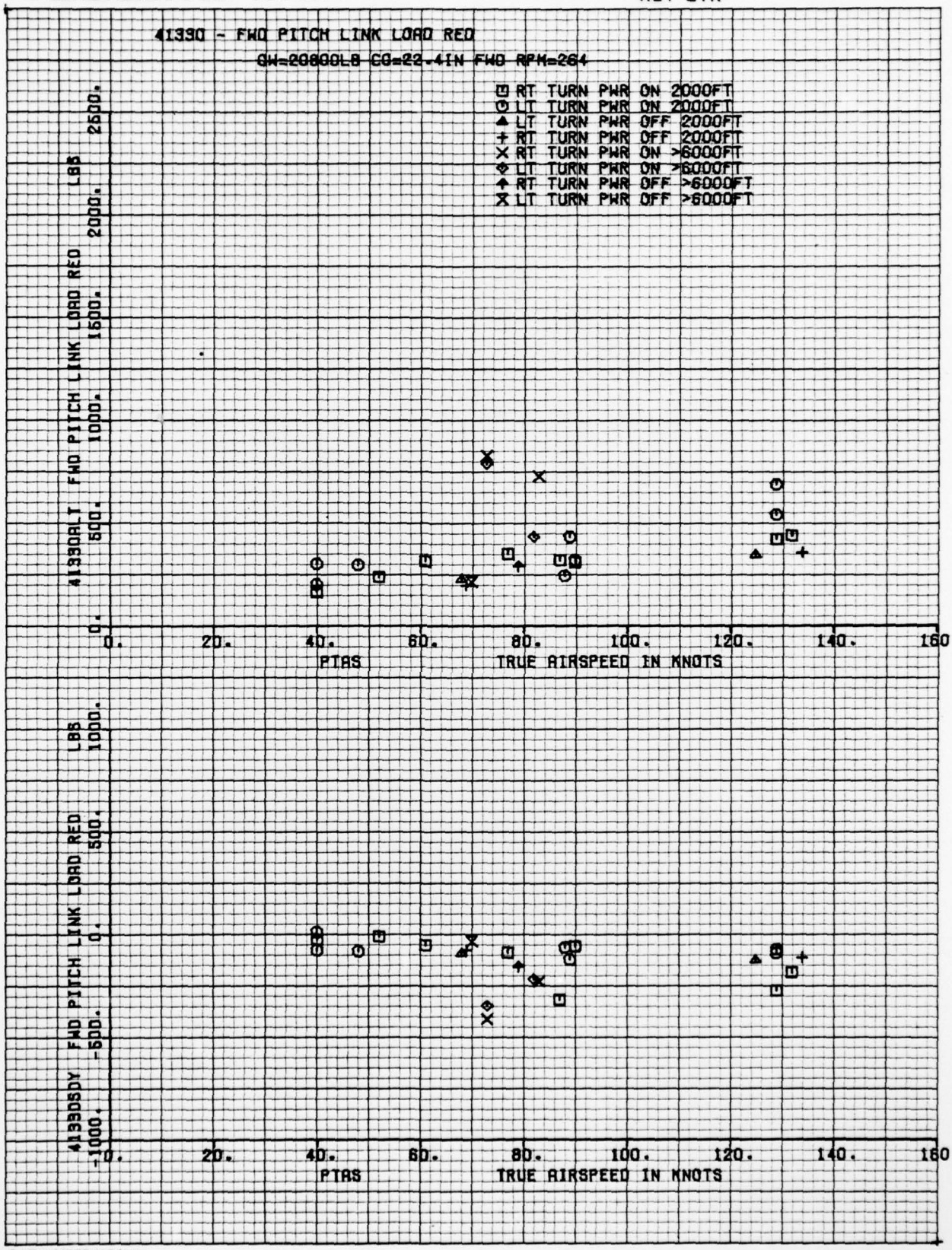


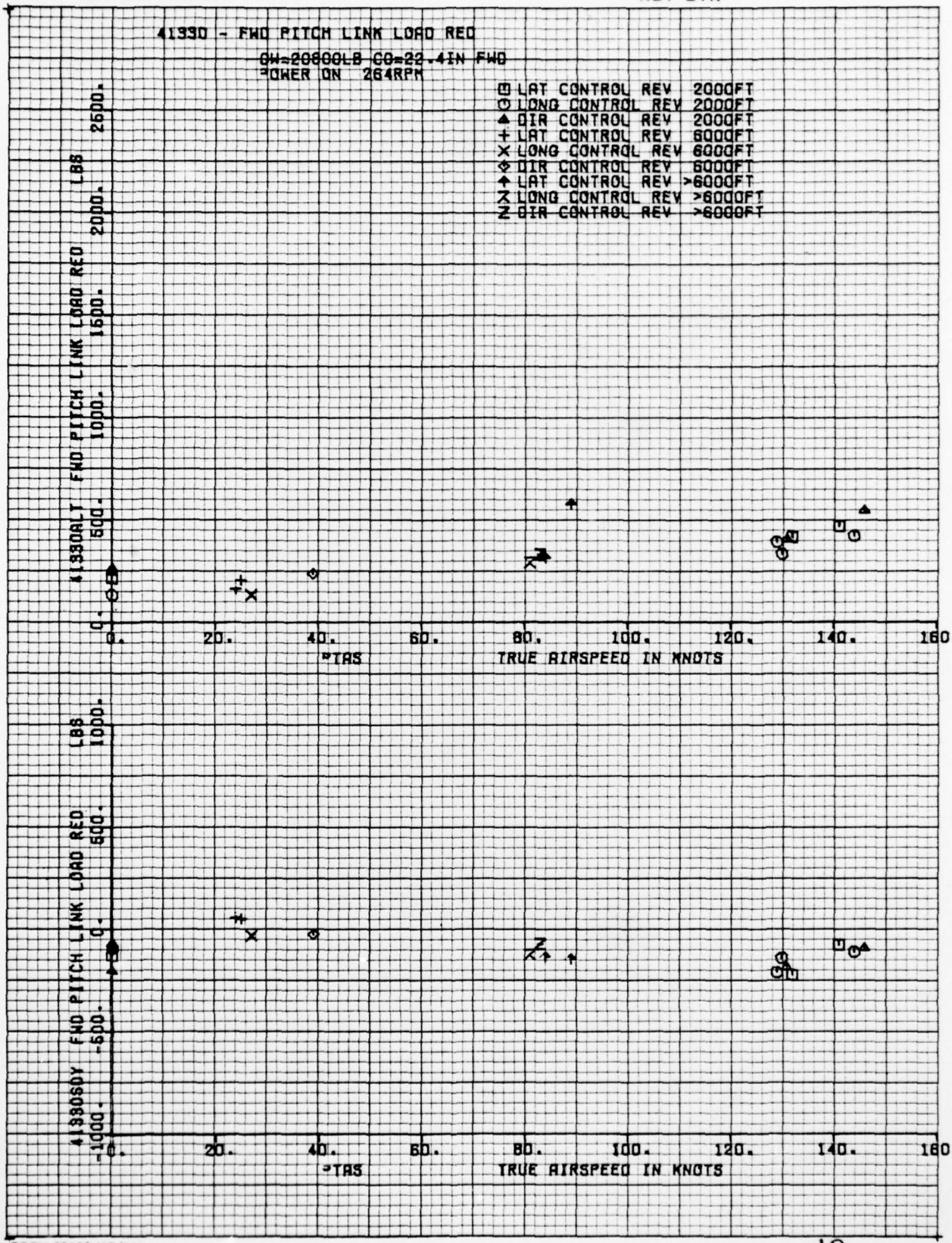
FORM 52300 (10/71)

-2

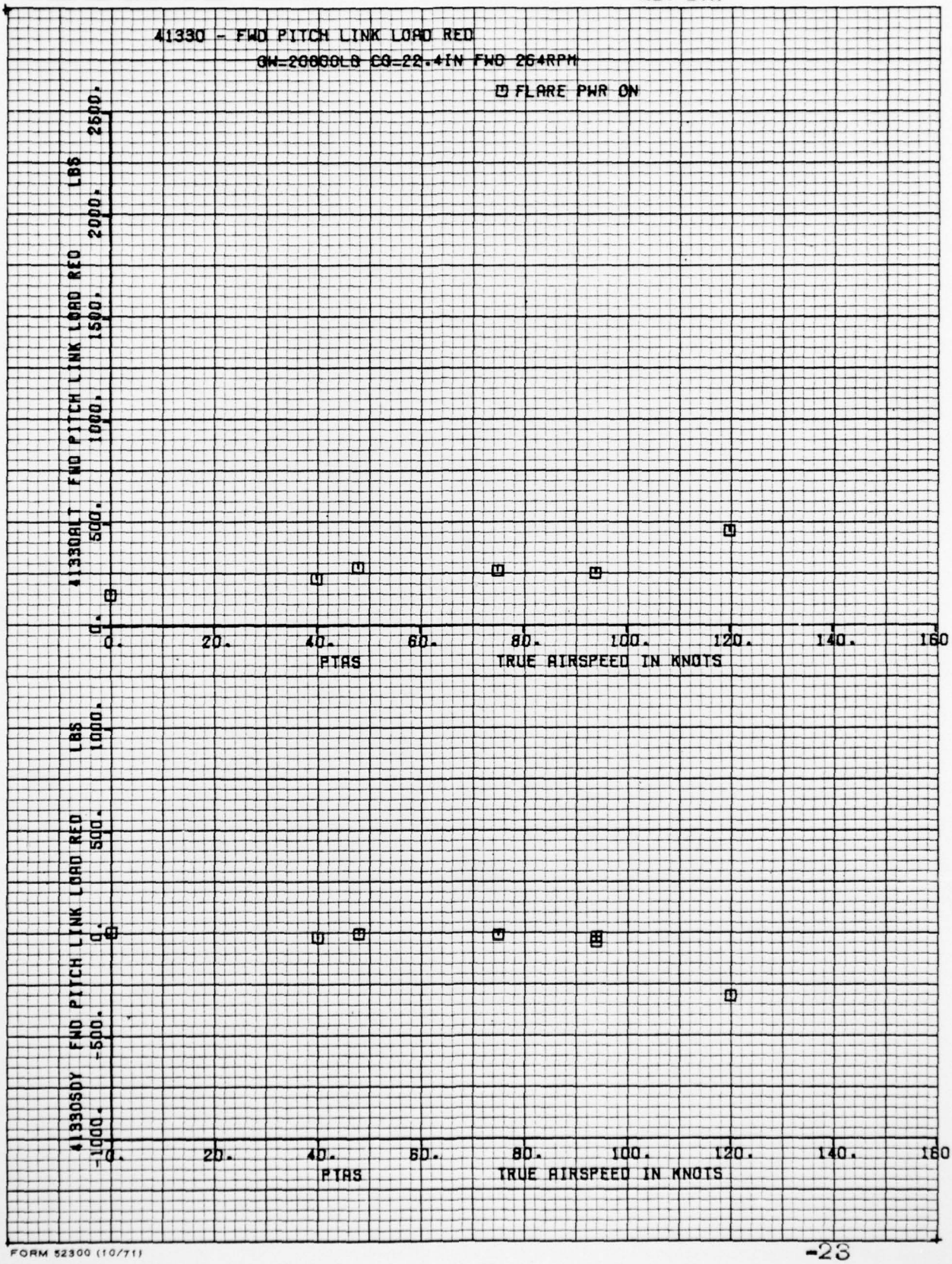


FORM 52300 (10/71)

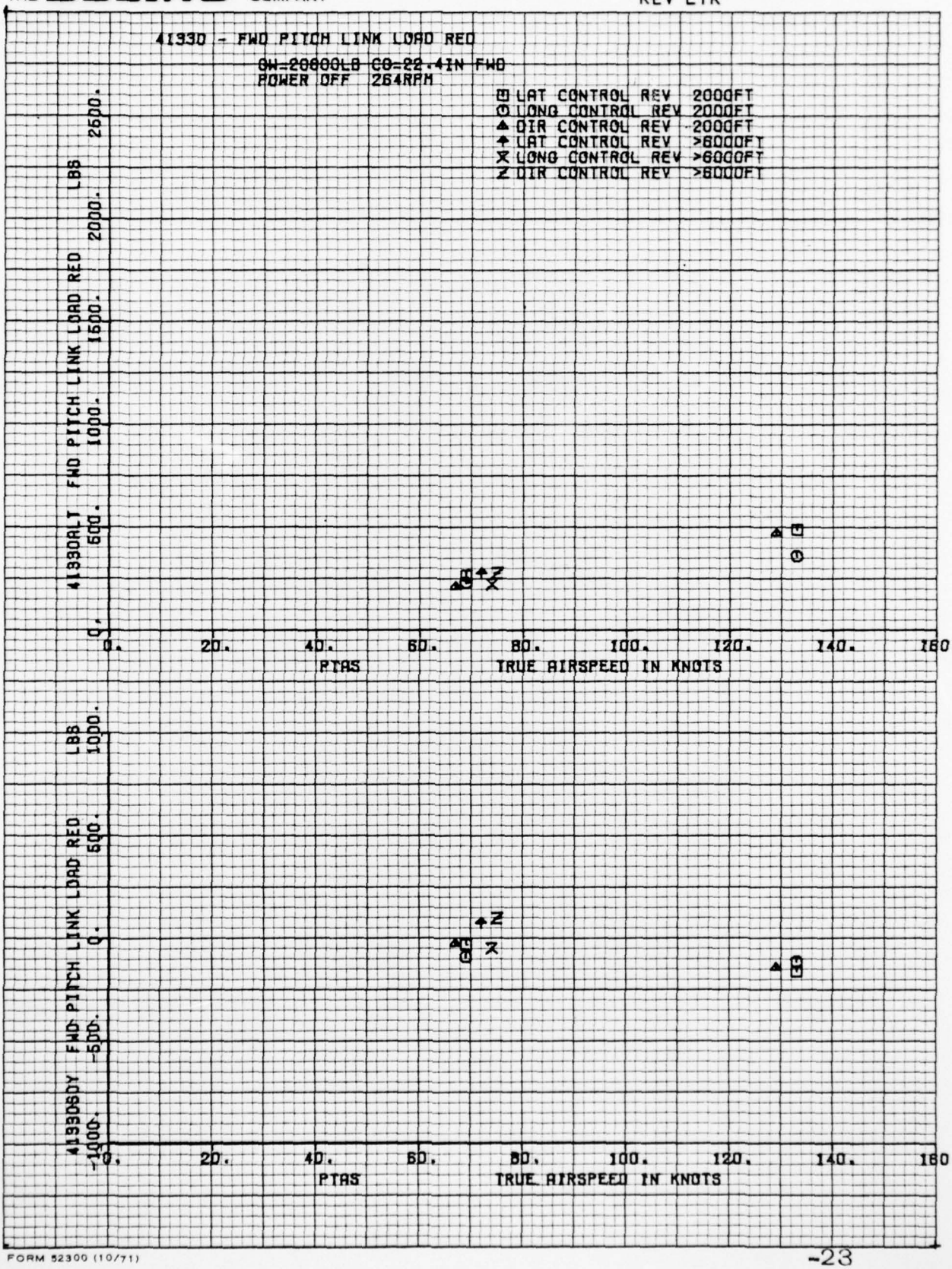

41330 - FWD PITCH LINK LOAD RED
GW=20800LB CG=22.4IN FWD RPM=264
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
41330ALT FWD PITCH LINK LOAD RED LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41330SDY FWD PITCH LINK LOAD RED LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS



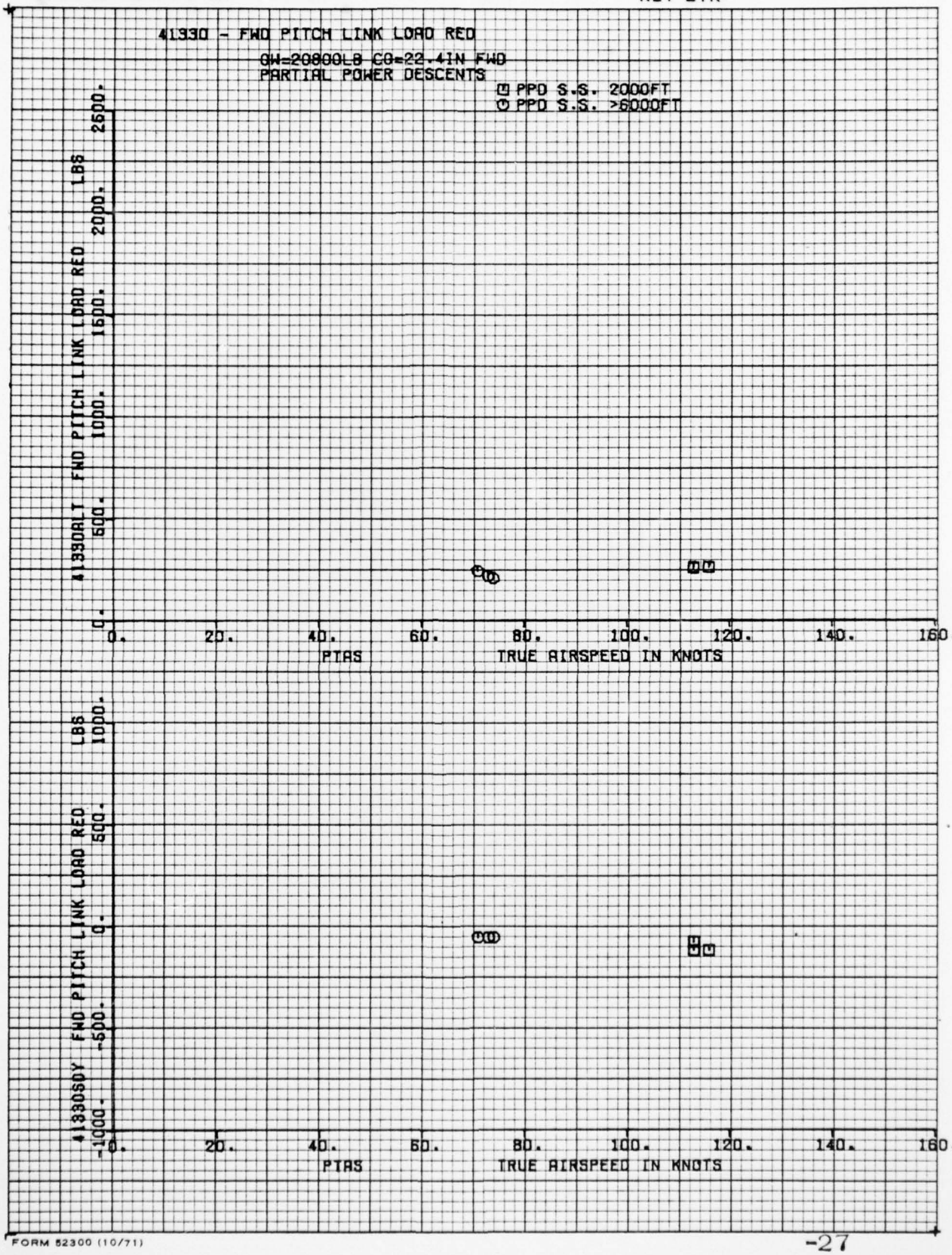
FORM 82300 (10/71)


41330 - FWD PITCH LINK LOAD RED
GW=20000LB CG=22.4IN FWD 264RPM
FLARE PWR ON
41330ALT FWD PITCH LINK LOAD REQ LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41330DY FWD PITCH LINK LOAD RED LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

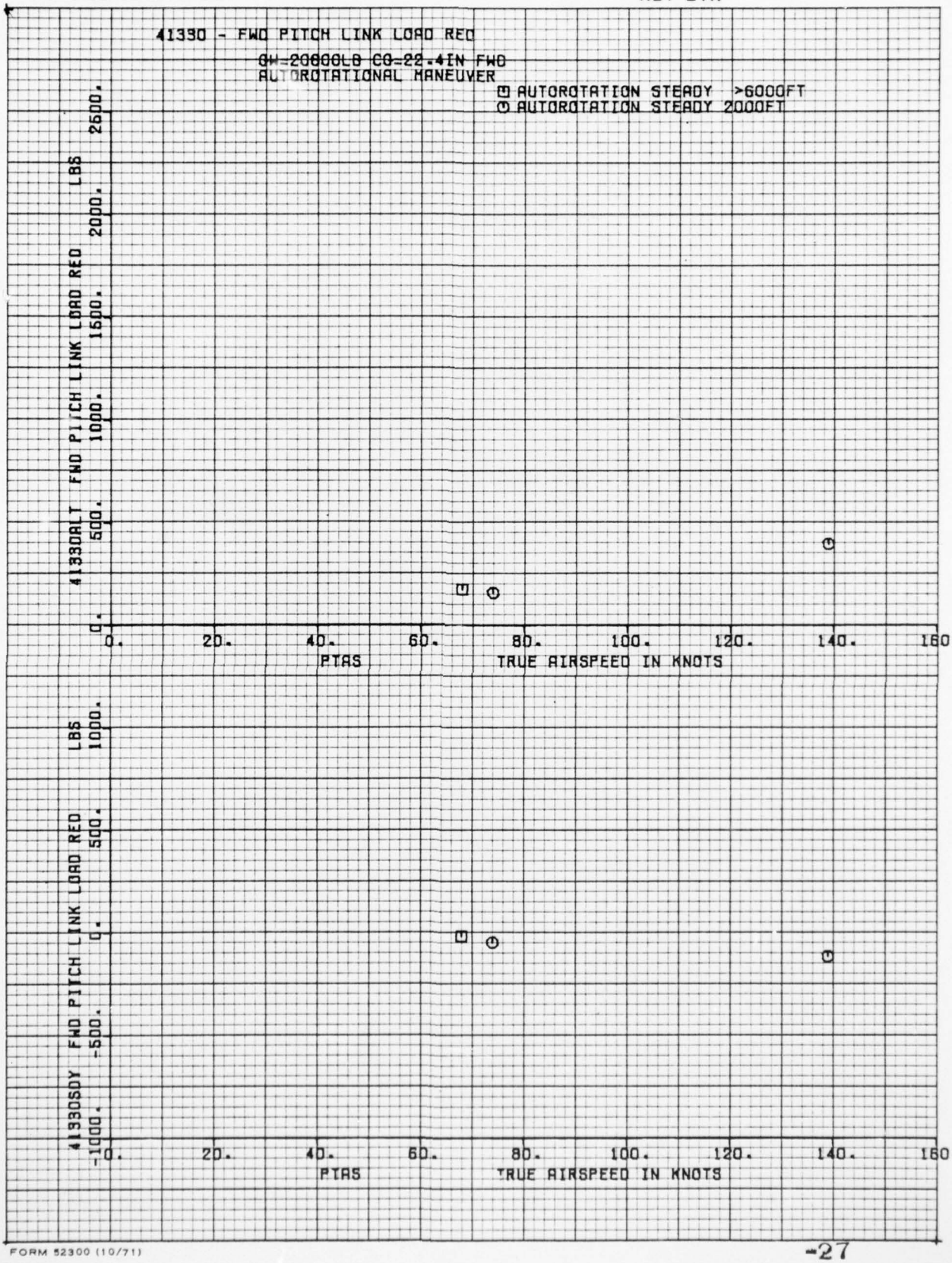
THE BOEING COMPANY



FORM 52300 (10/71)

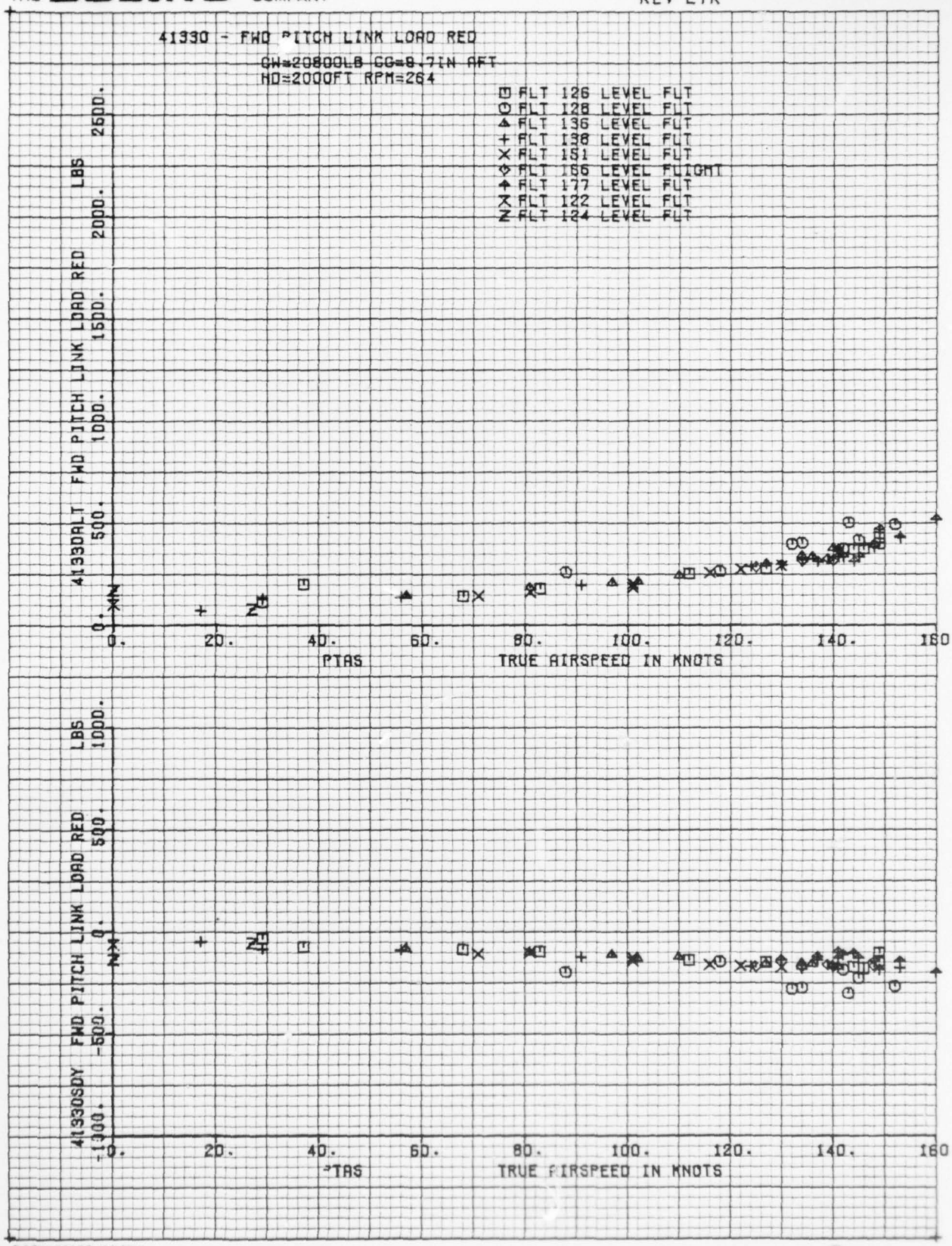

41330 - FWD PITCH LINK LOAD RED
GW=20800LB CG=22.4IN FWD
PARTIAL POWER DESCENTS
PPD S.S. 2000FT
PPD S.S. >6000FT
41330ALT FWD PITCH LINK LOAD RED LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41330SDY FWD PITCH LINK LOAD RED LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



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THE BOEING COMPANY

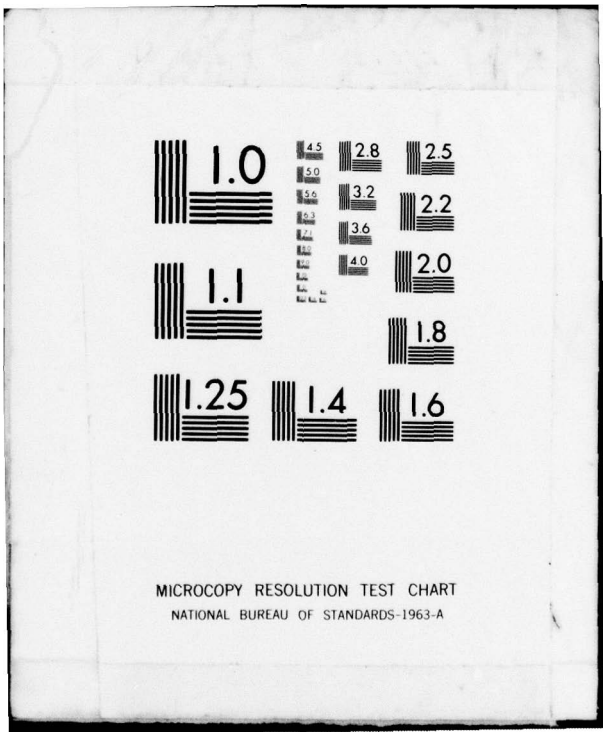


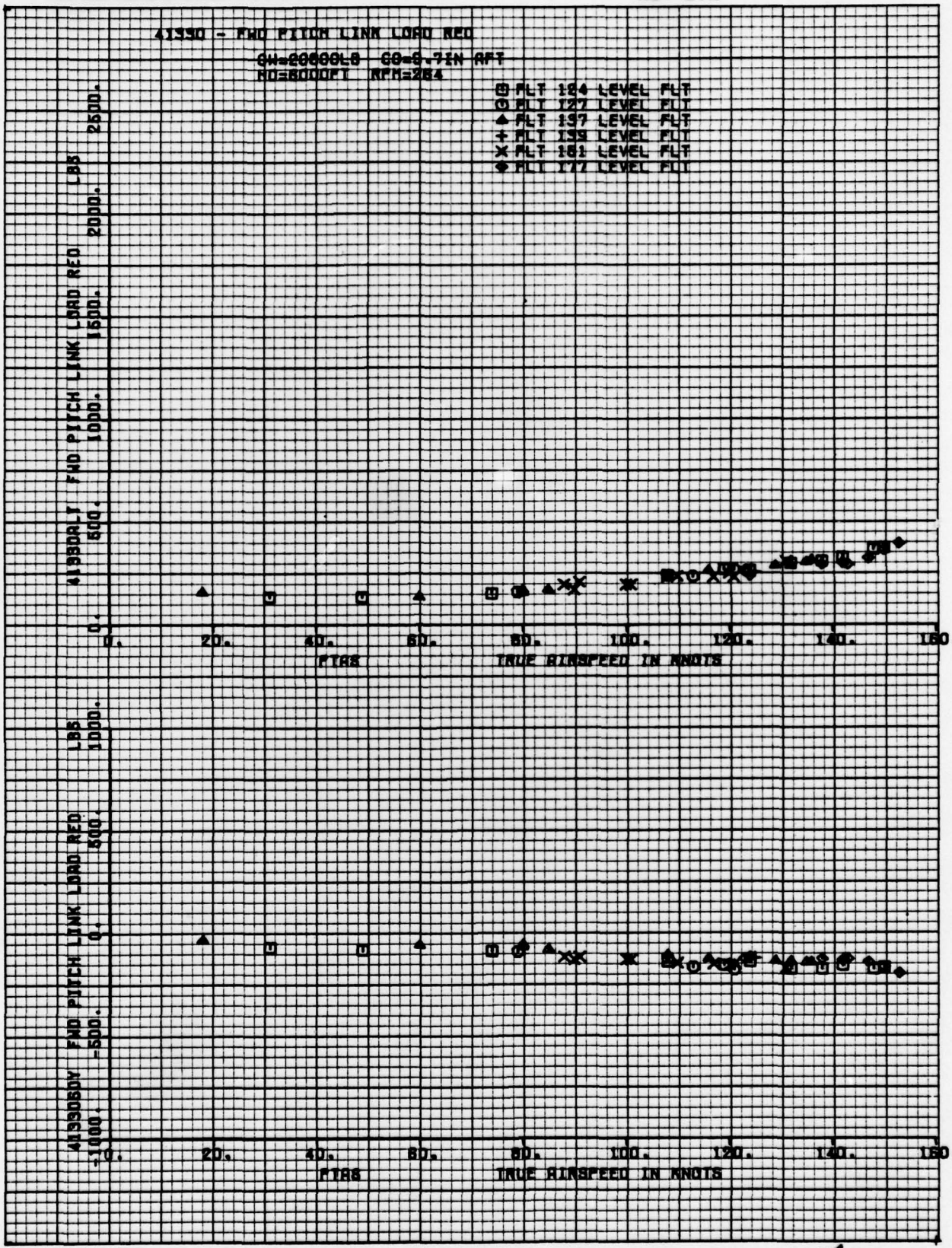
FORM 82300 (10/71)

AD-A075 615 BOEING VERTOL CO PHILADELPHIA PA F/G 1/3
CH-46 COMPOSITE ROTOR BLADE FLIGHT STRESS SURVEY DATA. VOLUME V--ETC(U)
1978 R AIELLO, J BENDO N00019-75-C-0396
UNCLASSIFIED D210-11168-3-VOL-6 NL

2 OF 4
AD A075615

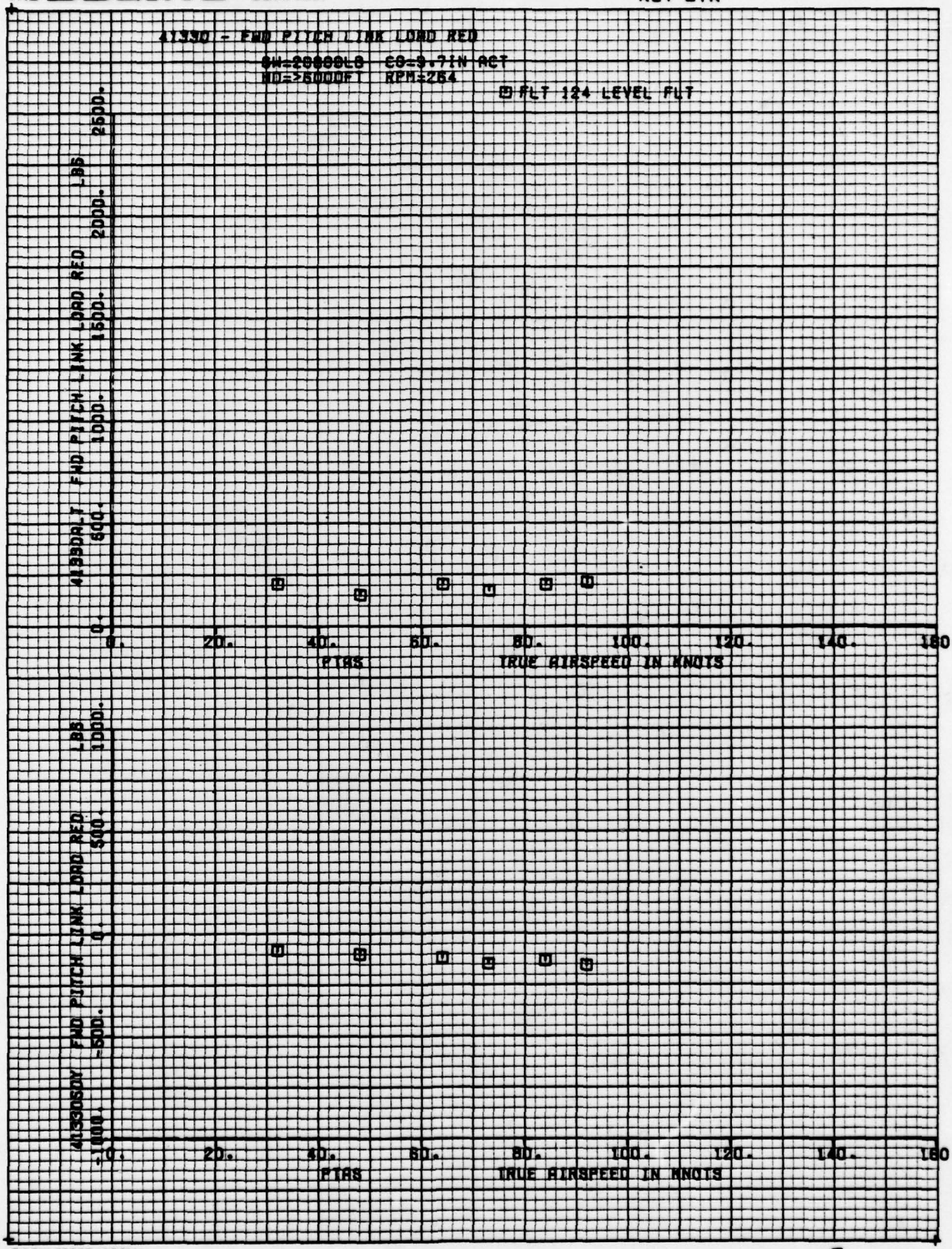



1.0
1.1
1.25
4.5
5.0
5.6
6.3
7.1
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.8
1.4
1.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

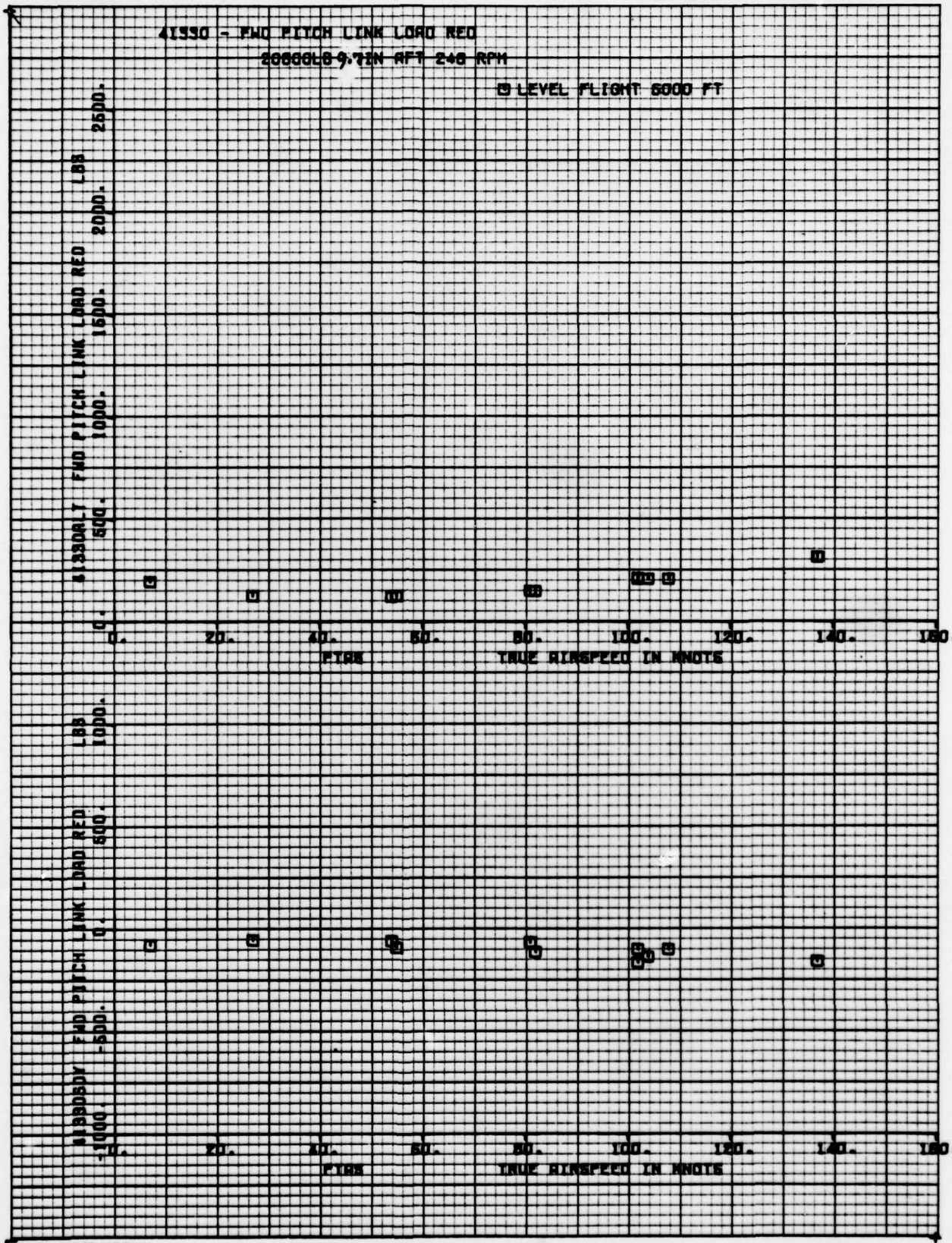


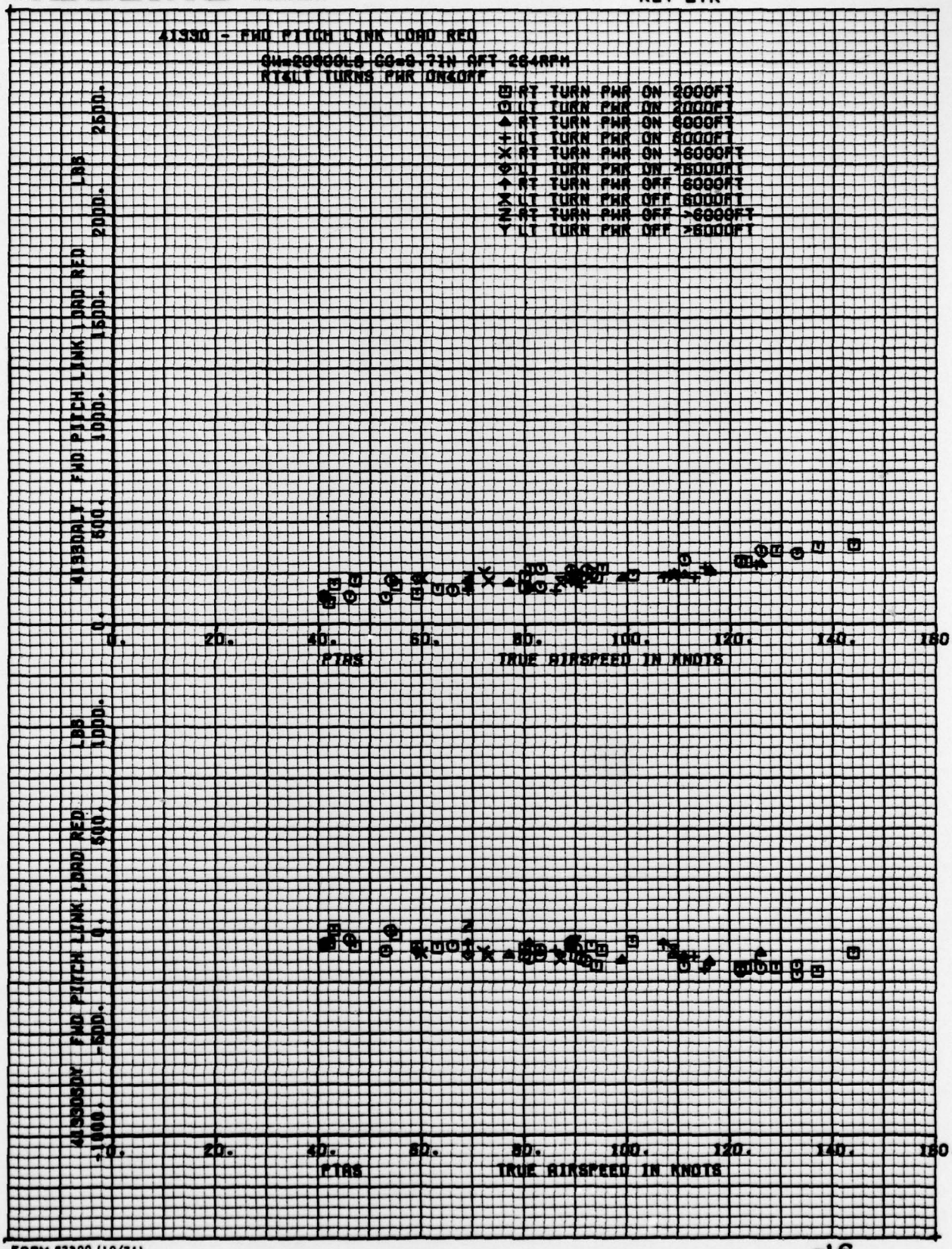
FORM 52300 (10/71)

-4

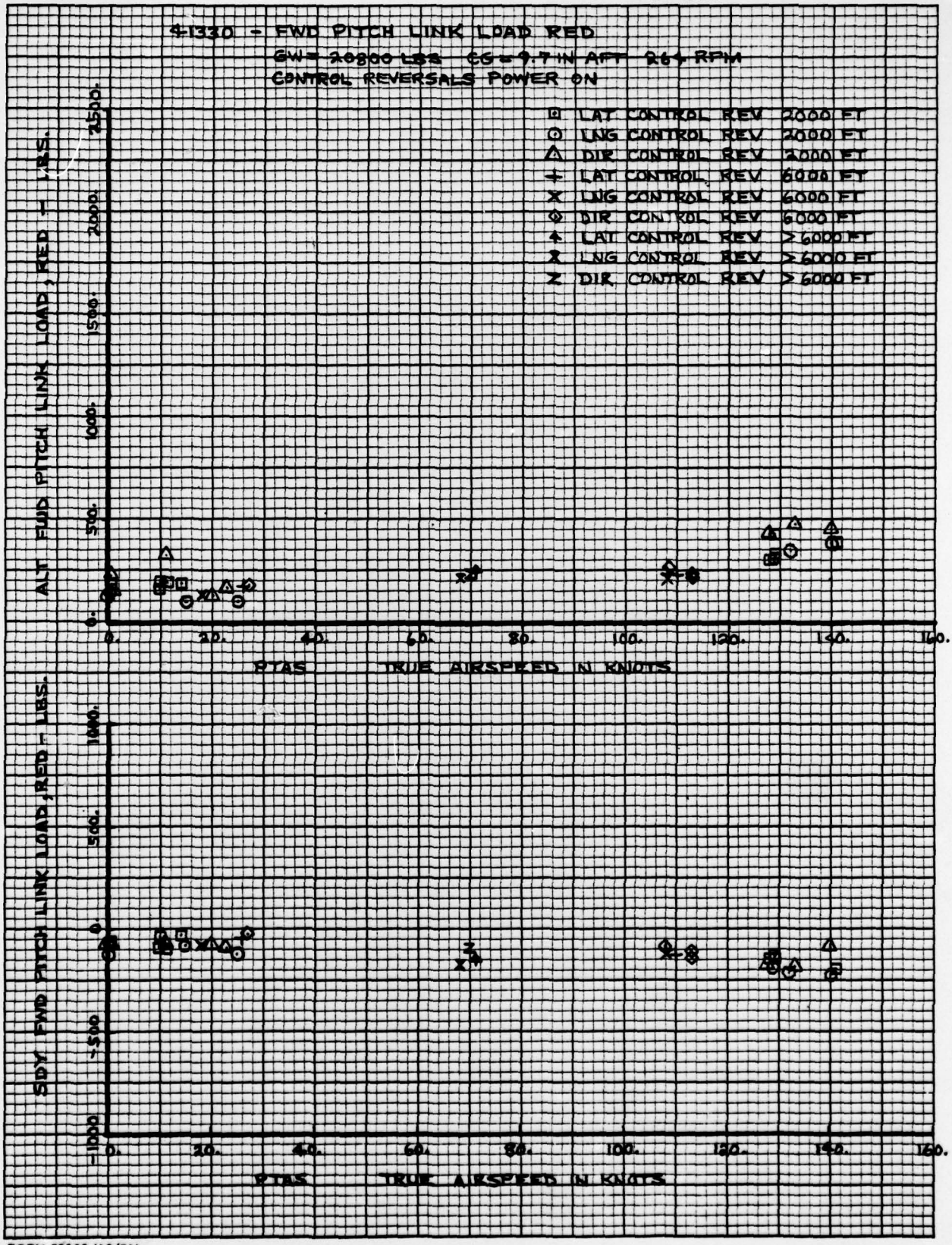

41330 - FWD PITCH LINK LORD RED
GW=20000LB CG=9.7IN AFT
HD=>5000FT RPM=264
FLT 124 LEVEL FLT
41330RLT FWD PITCH LINK LORD RED LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
41330SOV FWD PITCH LINK LORD RED LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

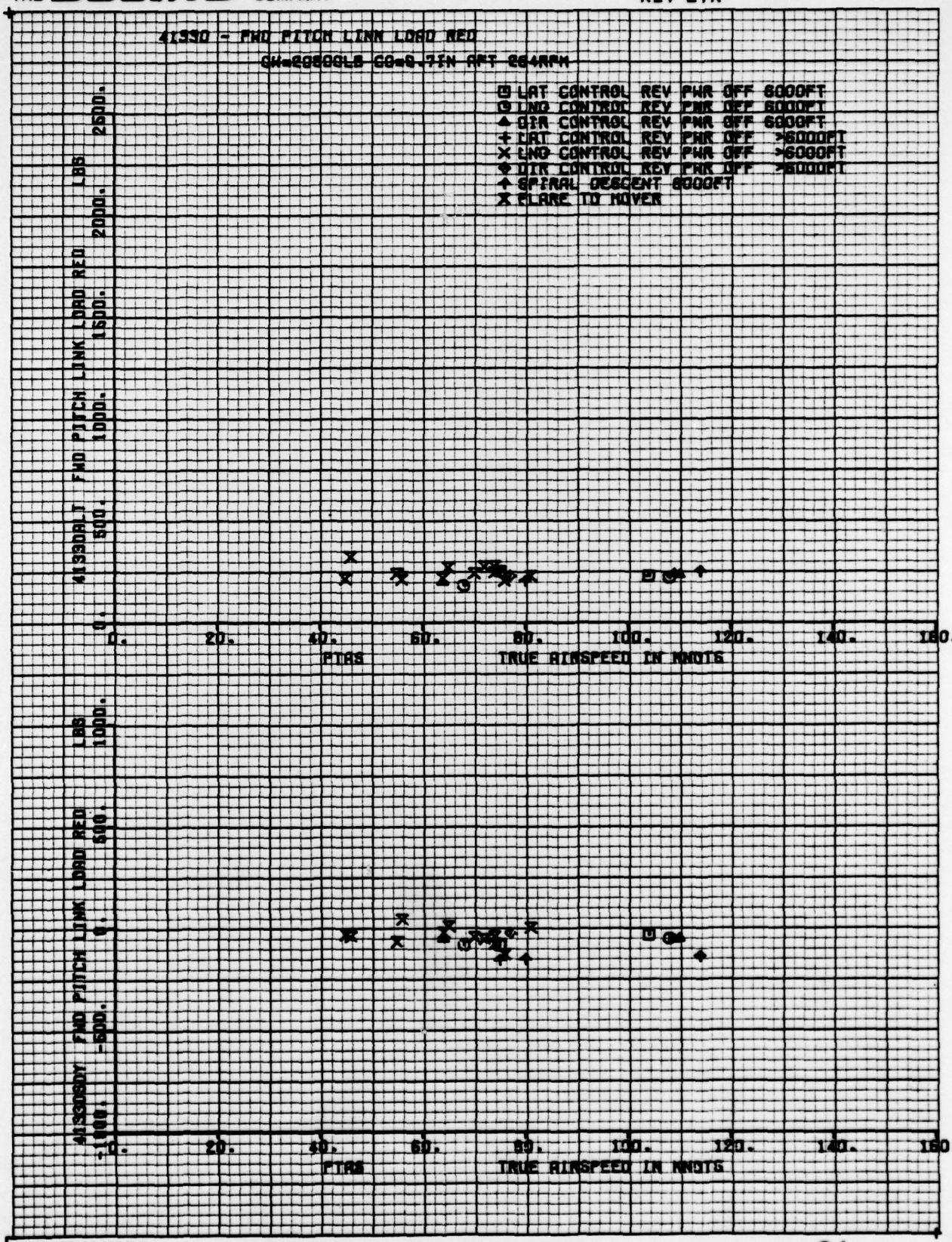


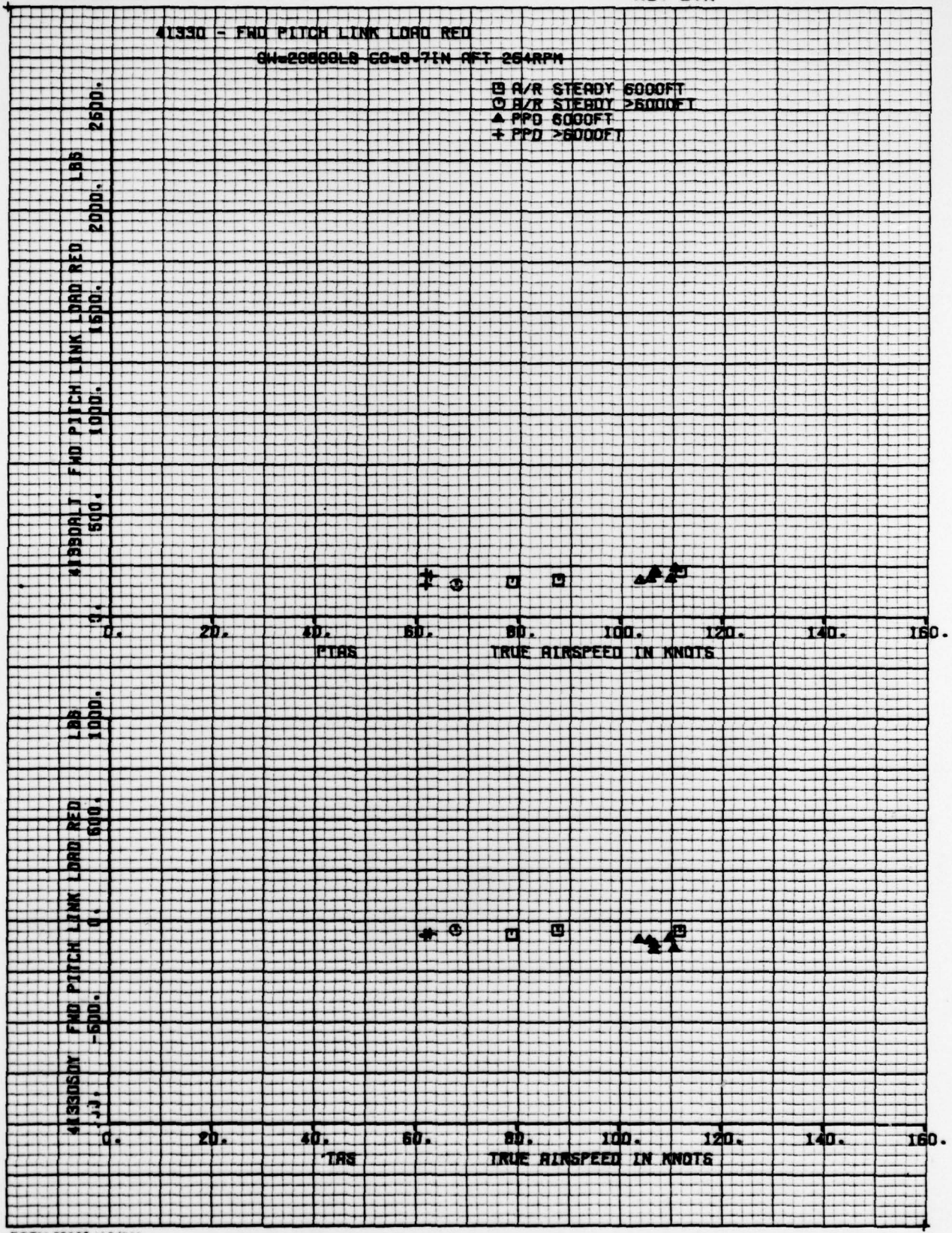

41330 - FWD PITCH LINK LOAD REQ
GW=20000LB CG=9.71N AFT 264RPM
RT&LT TURNS PWR ON&OFF
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
RT TURN PWR ON 6000FT
LT TURN PWR ON 6000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF 6000FT
LT TURN PWR OFF 6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
41330ALT FWD PITCH LINK LOAD REQ LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41330DLY FWD PITCH LINK LOAD REQ LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

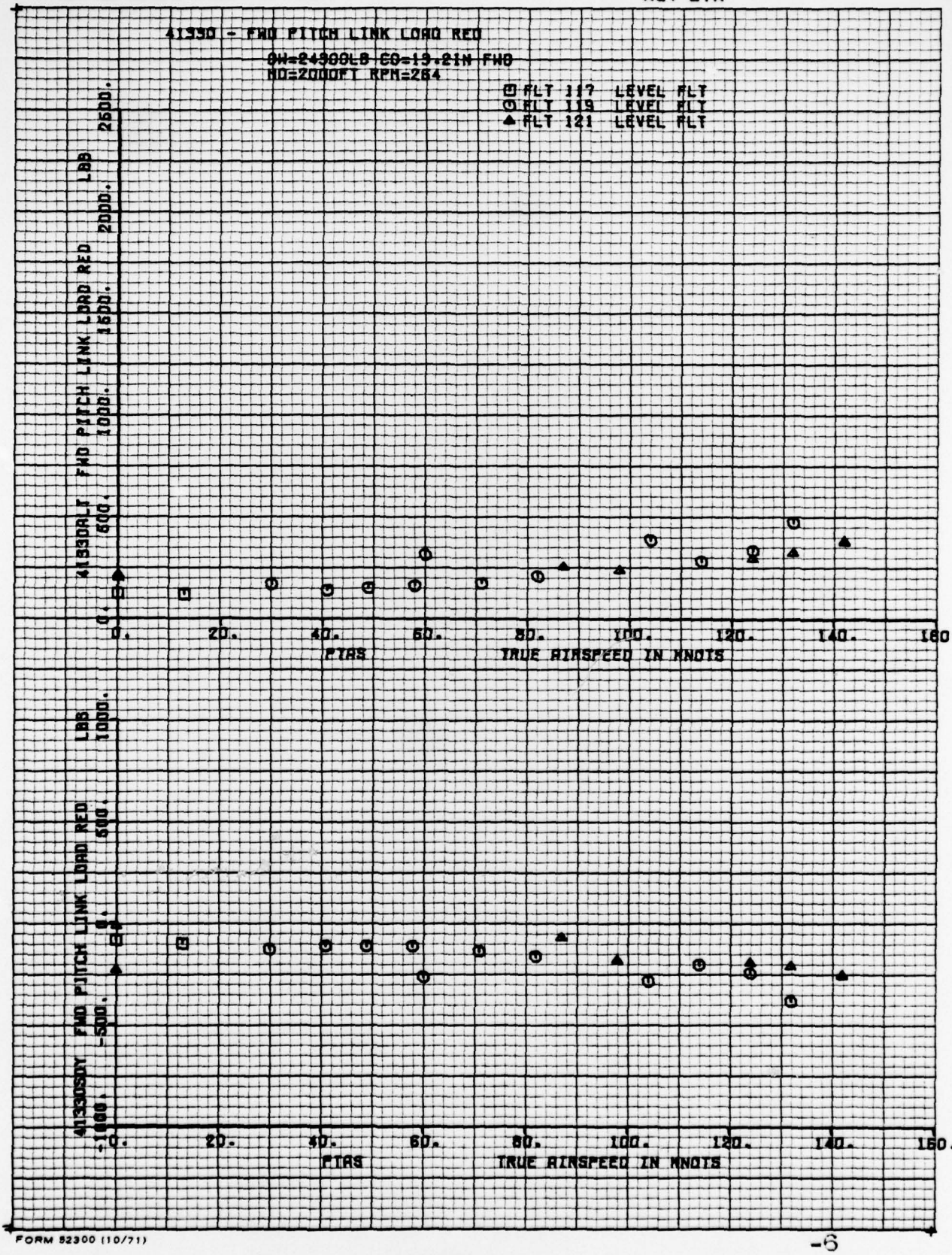
THE BOEING COMPANY



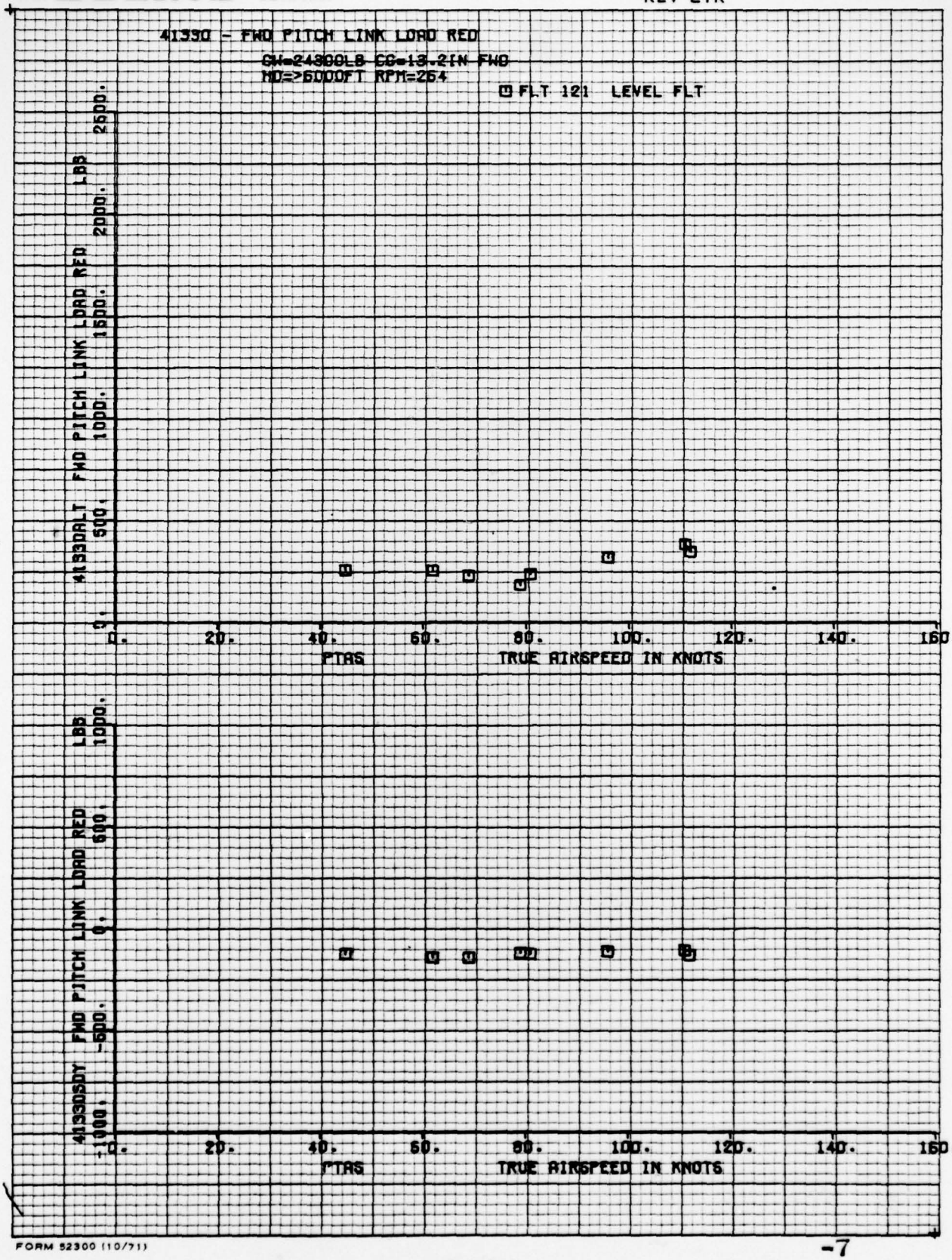
FORM 82300 (10/71)


41330 - FWD PITCH LINK LOAD RED
GW=200000LB CG=8.7IN AFT 264RPM
LAT CONTROL REV PWR OFF 6000FT
LNG CONTROL REV PWR OFF 6000FT
DIR CONTROL REV PWR OFF 6000FT
LAT CONTROL REV PWR OFF >6000FT
LNG CONTROL REV PWR OFF >6000FT
DIR CONTROL REV PWR OFF >6000FT
SPIRAL DESCENT 8000FT
FLARE TO HOVER
41330ALT FWD PITCH LINK LOAD RED LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
41330DY FWD PITCH LINK LOAD RED LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS


41330 - FWD PITCH LINK LOAD RED
GW=20000LB CG=8.7IN AFT 264RPM
A/R STEADY 6000FT
A/R STEADY >6000FT
PPD 6000FT
PPD >6000FT
41330ALT FWD PITCH LINK LOAD RED LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41330SDY FWD PITCH LINK LOAD RED LBS
1000.
600.
0.
-500.
-JJ.
0.
20.
40.
60.
80.
100.
120.
140.
160.
TAS
TRUE AIRSPEED IN KNOTS

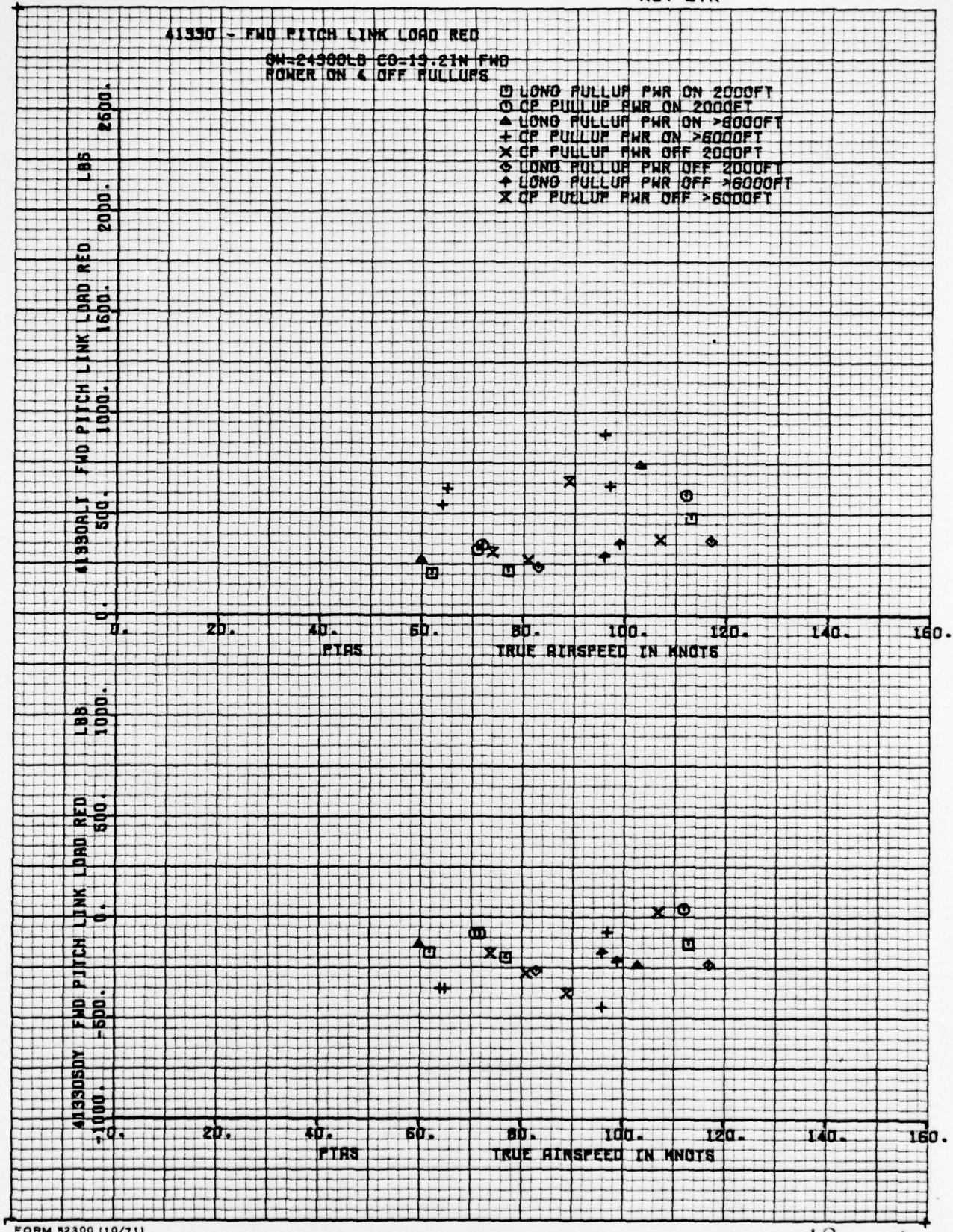

41330 - FWD PITCH LINK LOAD RED
GW=24300LB CG=19.2IN FWD
HO=20000FT RPM=264
FLT 117 LEVEL FLT
FLT 119 LEVEL FLT
FLT 121 LEVEL FLT
41330ALF FWD PITCH LINK LOAD RED LBS
2600.
2000.
1600.
1000.
600.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
41330SDY FWD PITCH LINK LOAD RED LBS
1000.
600.
0.
-500.
+1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



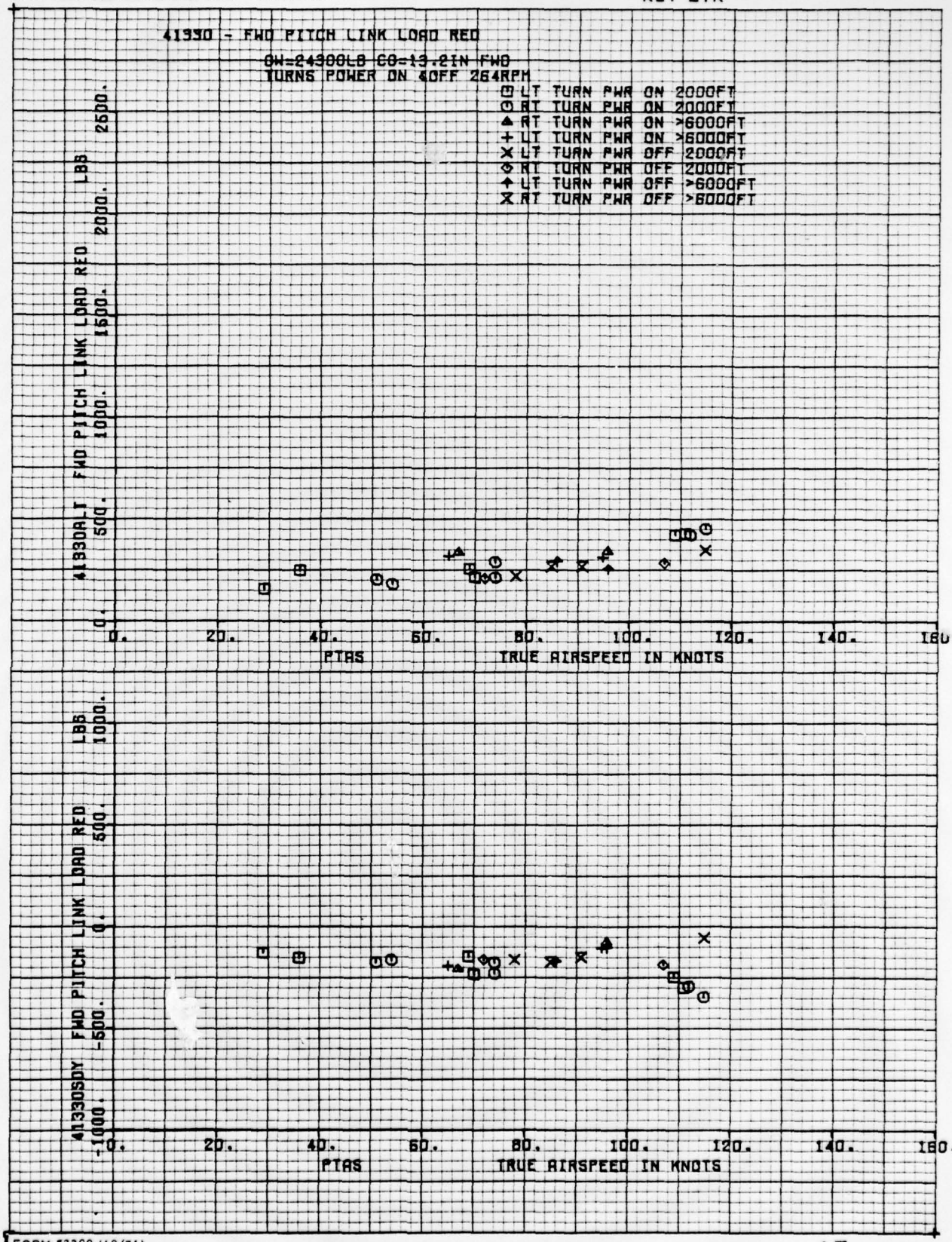
FORM 52300 (10/71)

THE BOEING COMPANY

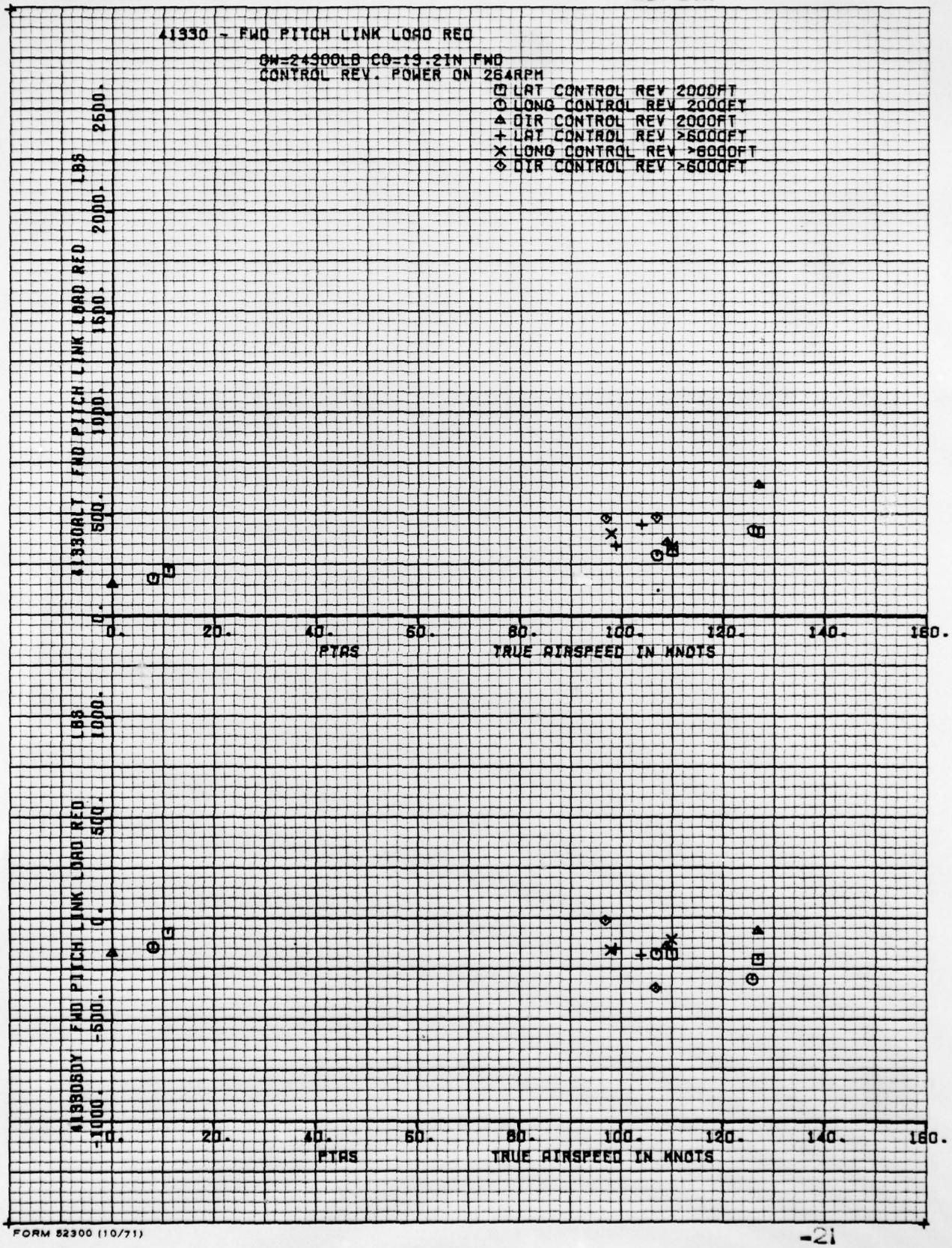


FORM 52300 (10/71)

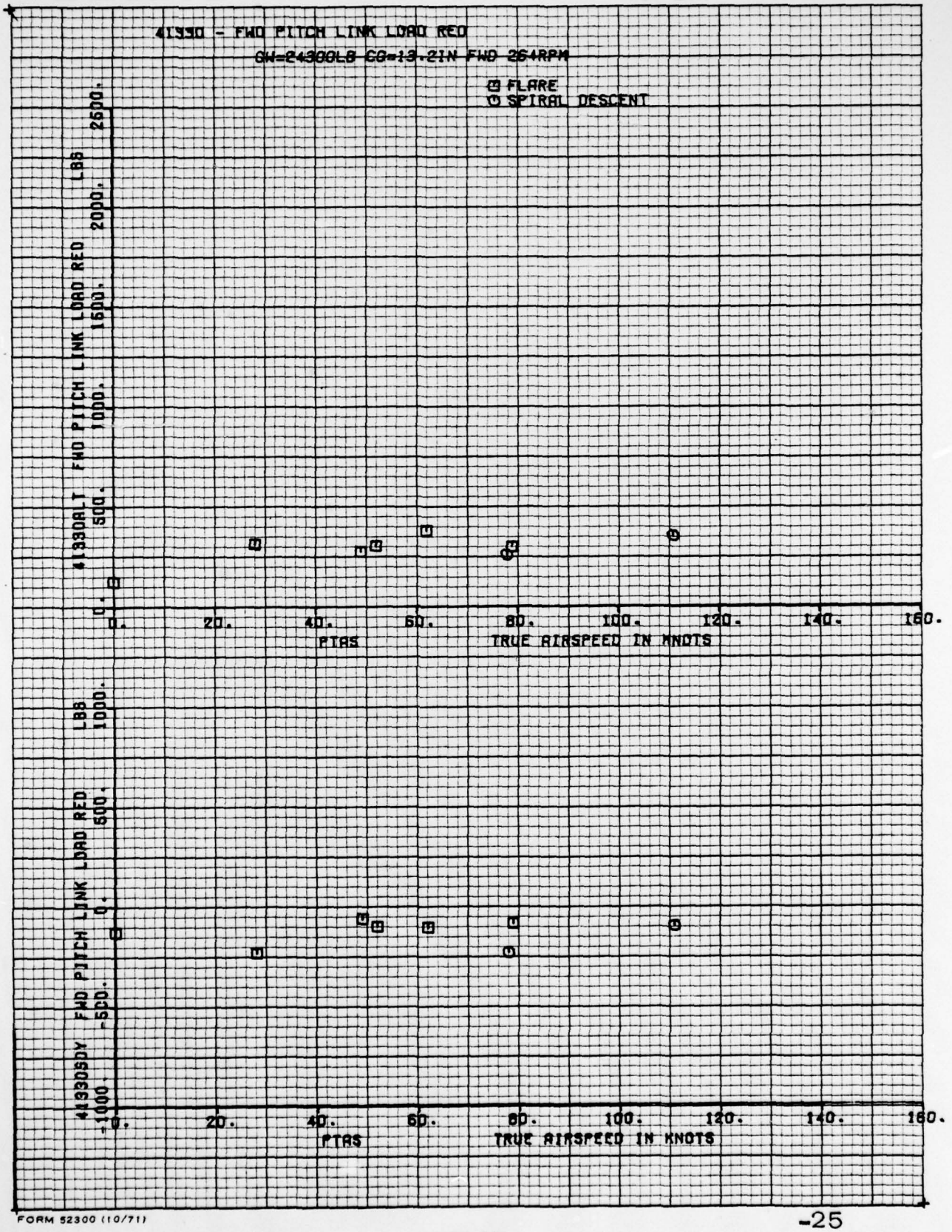
THE BOEING COMPANY

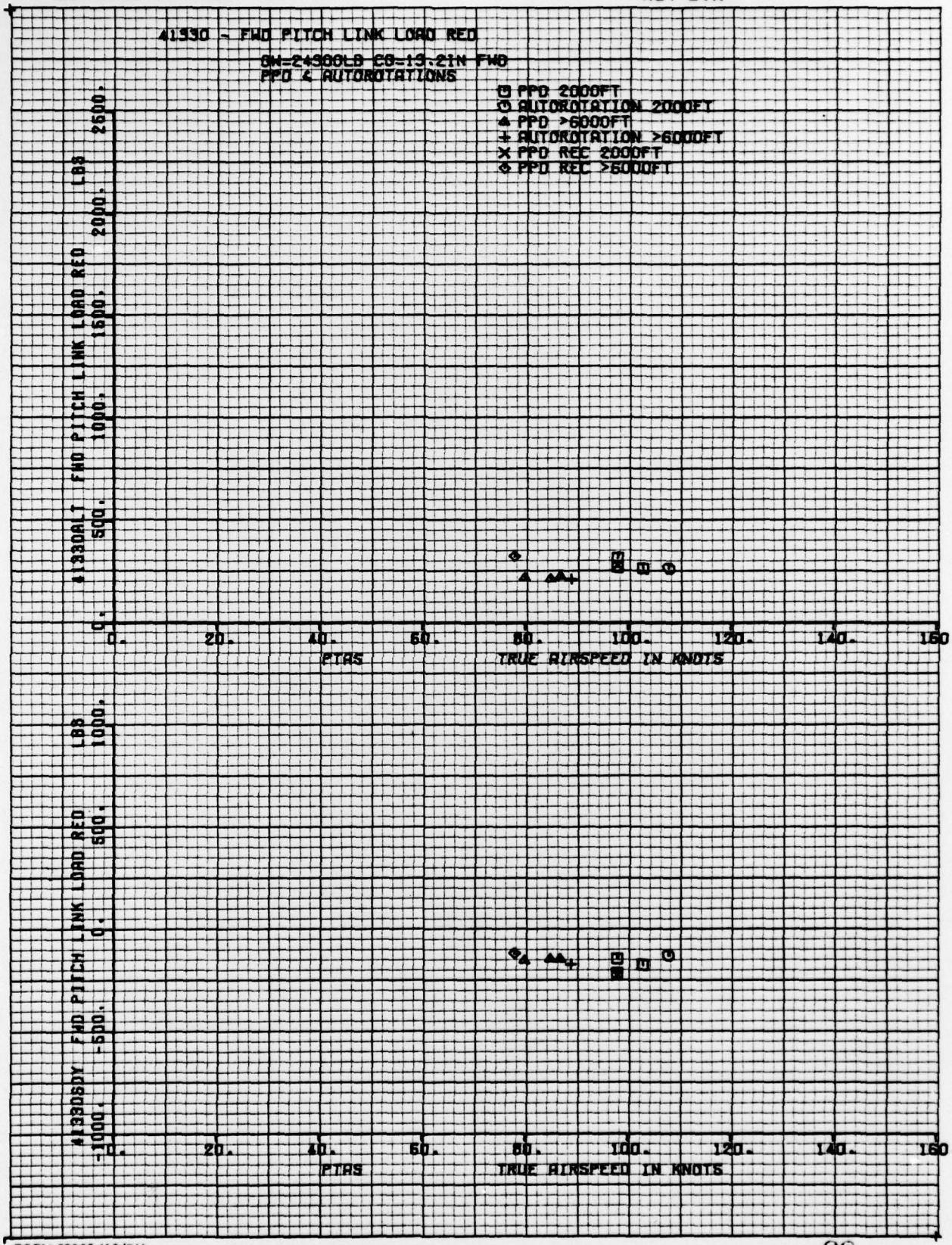


FORM 52300 (10/71)

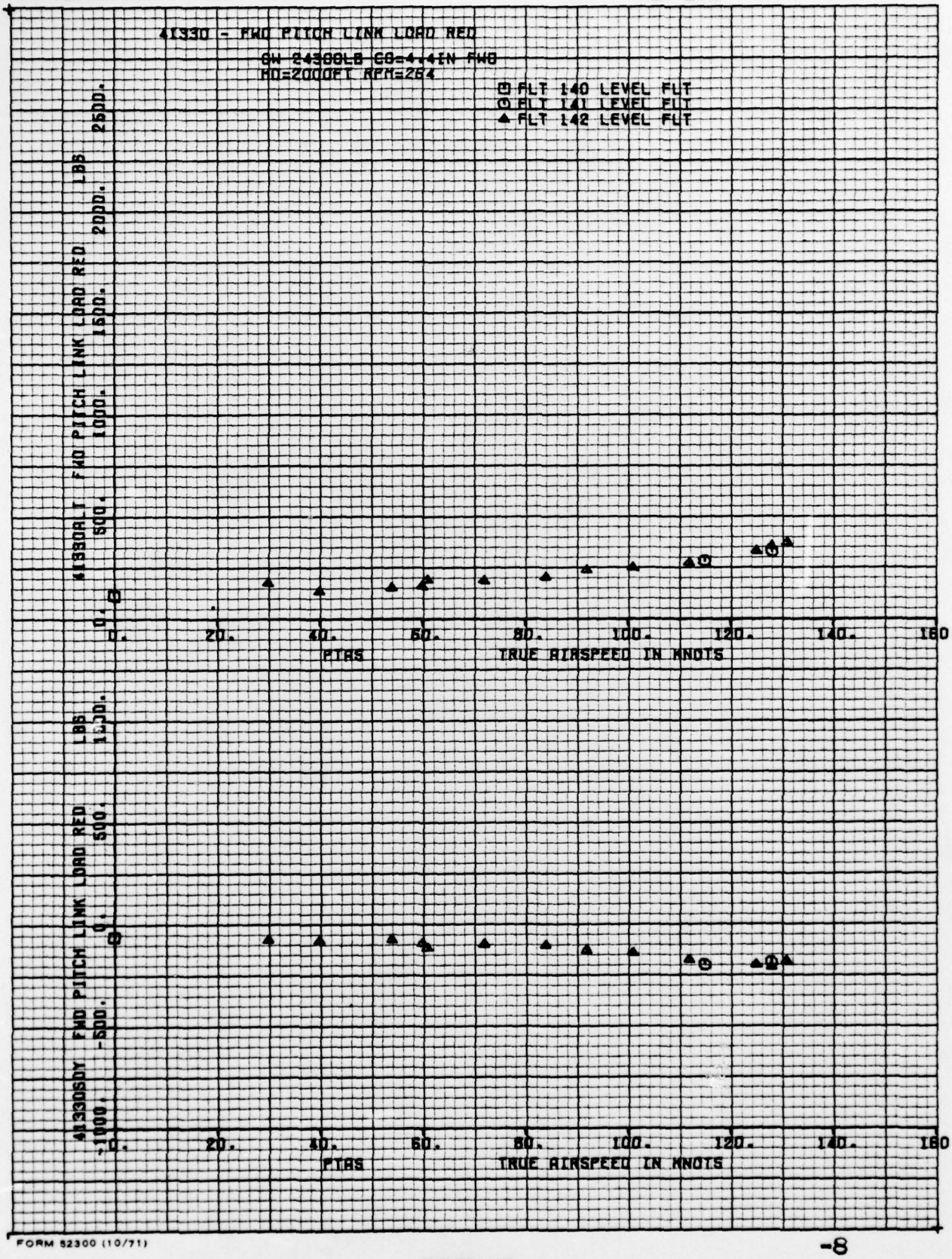

41330 - FWD PITCH LINK LOAD REQ
GW=24300LB CG=19.2IN FWD
CONTROL REV. POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
41330ALT FWD PITCH LINK LOAD REQ LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
AIRBODY FWD PITCH LINK LOAD REQ LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

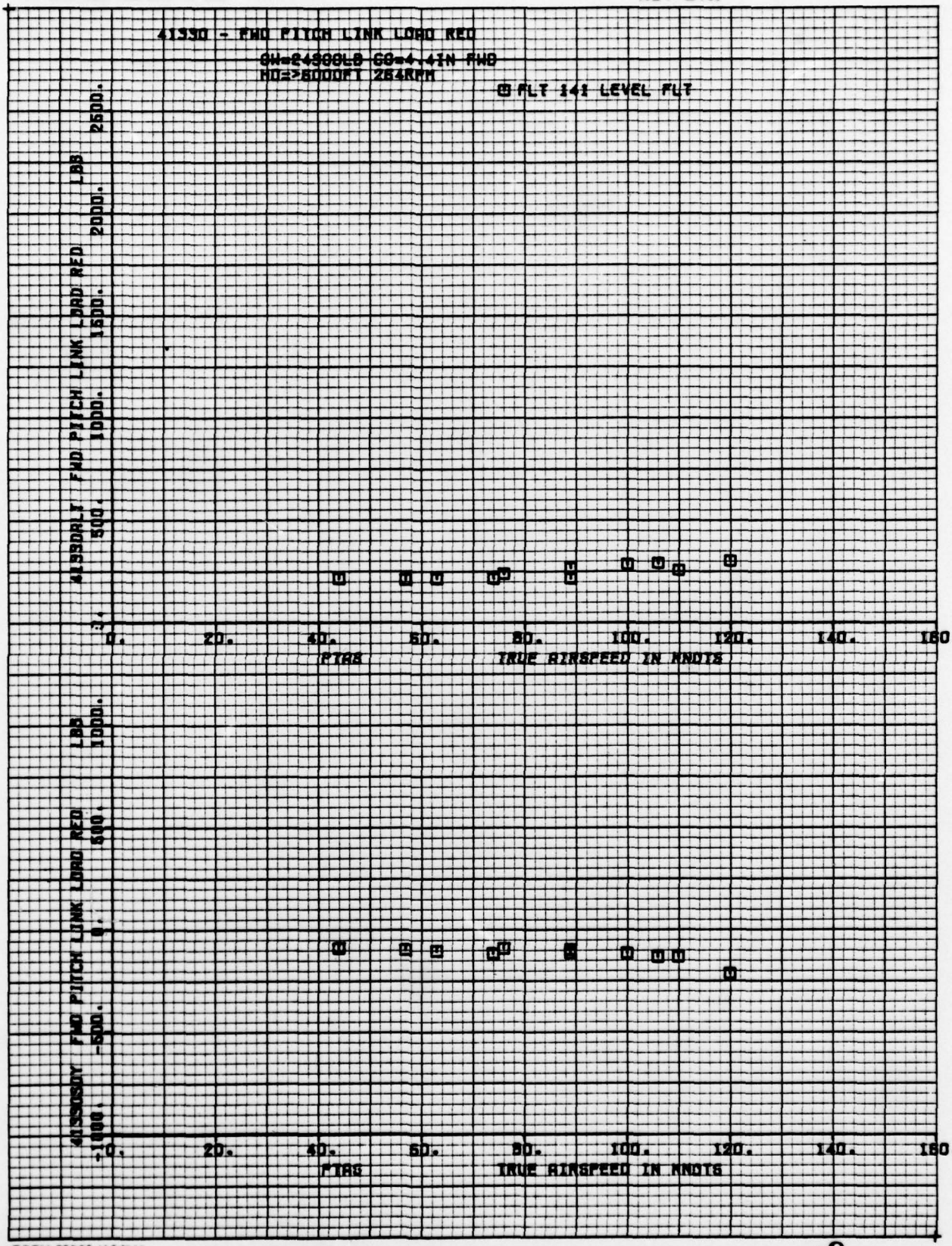



41330 - FWD PITCH LINK LOAD RED
GW=24300LB CG=13.21N FWD
PPD & AUTOROTATIONS
PPD 2000FT
AUTOROTATION 2000FT
PPD >6000FT
AUTOROTATION >6000FT
PPD REC 2000FT
PPD REC >6000FT
41330ALT FWD PITCH LINK LOAD RED LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41330SDY FWD PITCH LINK LOAD RED LBS
1000.
500.
0.
-500.
-1000.
-0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

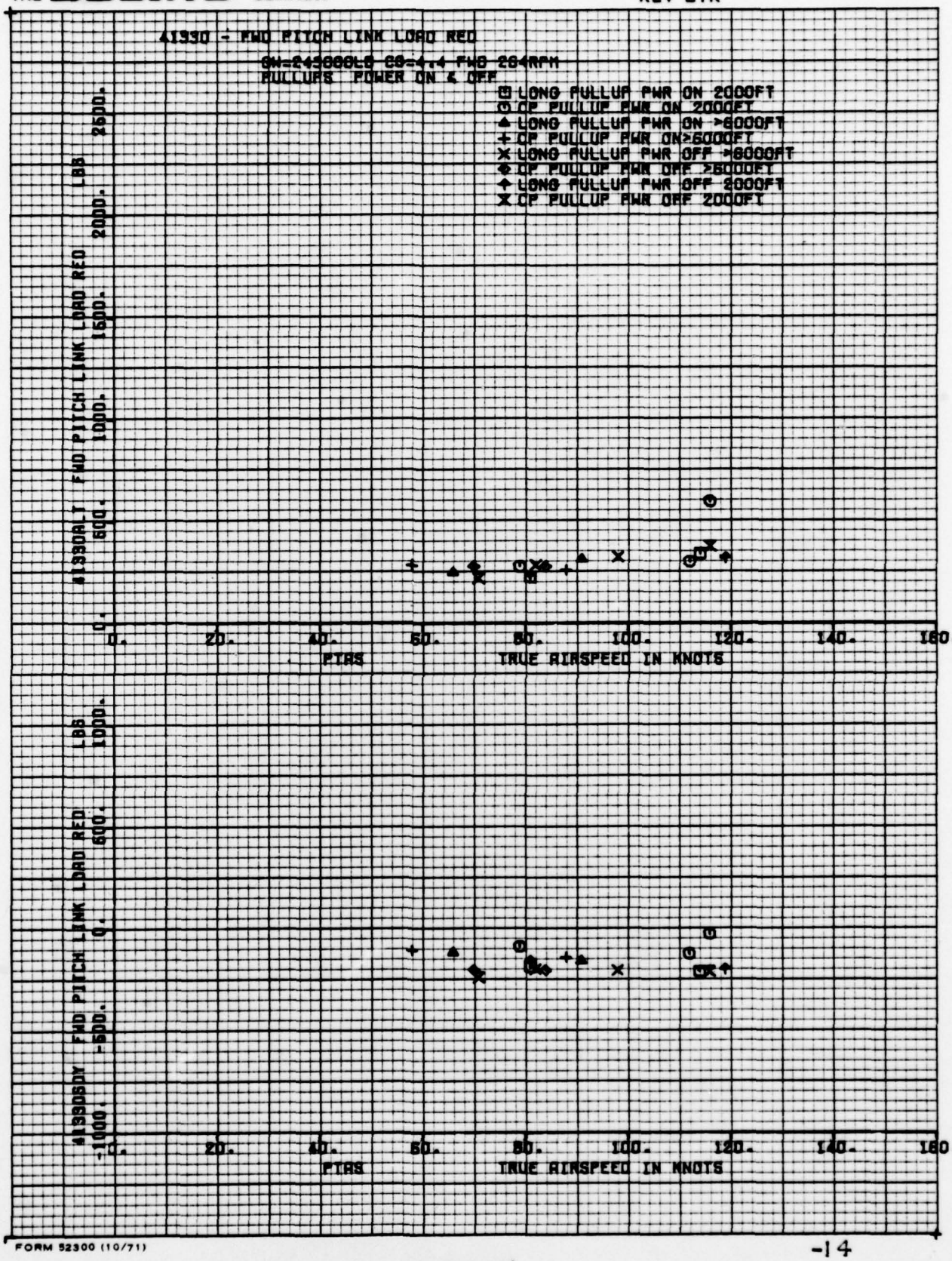
THE BOEING COMPANY



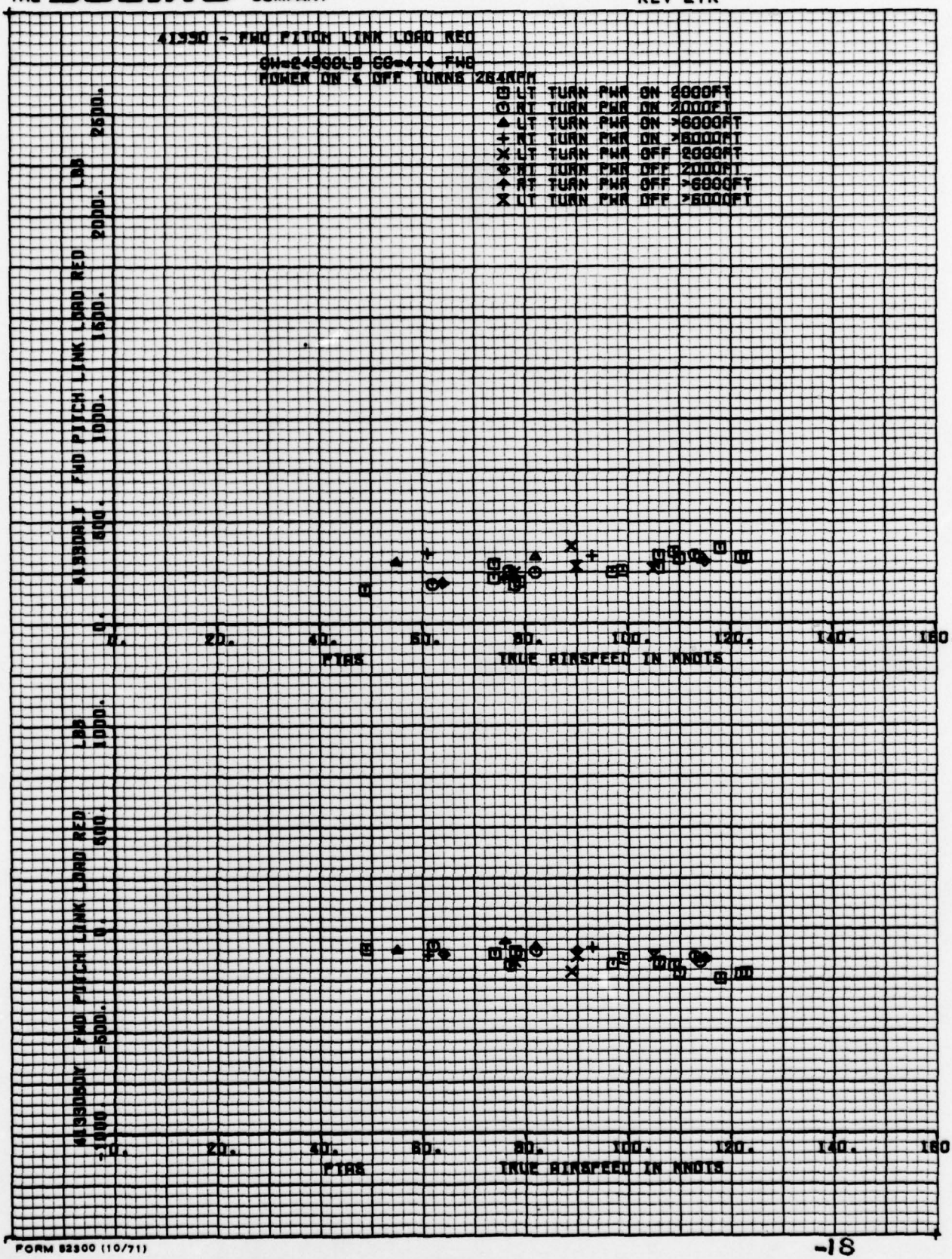
FORM 52300 (10/71)


41330 - FWD PITCH LINK LOAD REQ
GW=248000LB CG=4.4IN FWD
HO=>6000FT 264KAM
FLT 141 LEVEL FLT
41330RLF FWD PITCH LINK LOAD REQ LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
41330SOV FWD PITCH LINK LOAD REQ LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

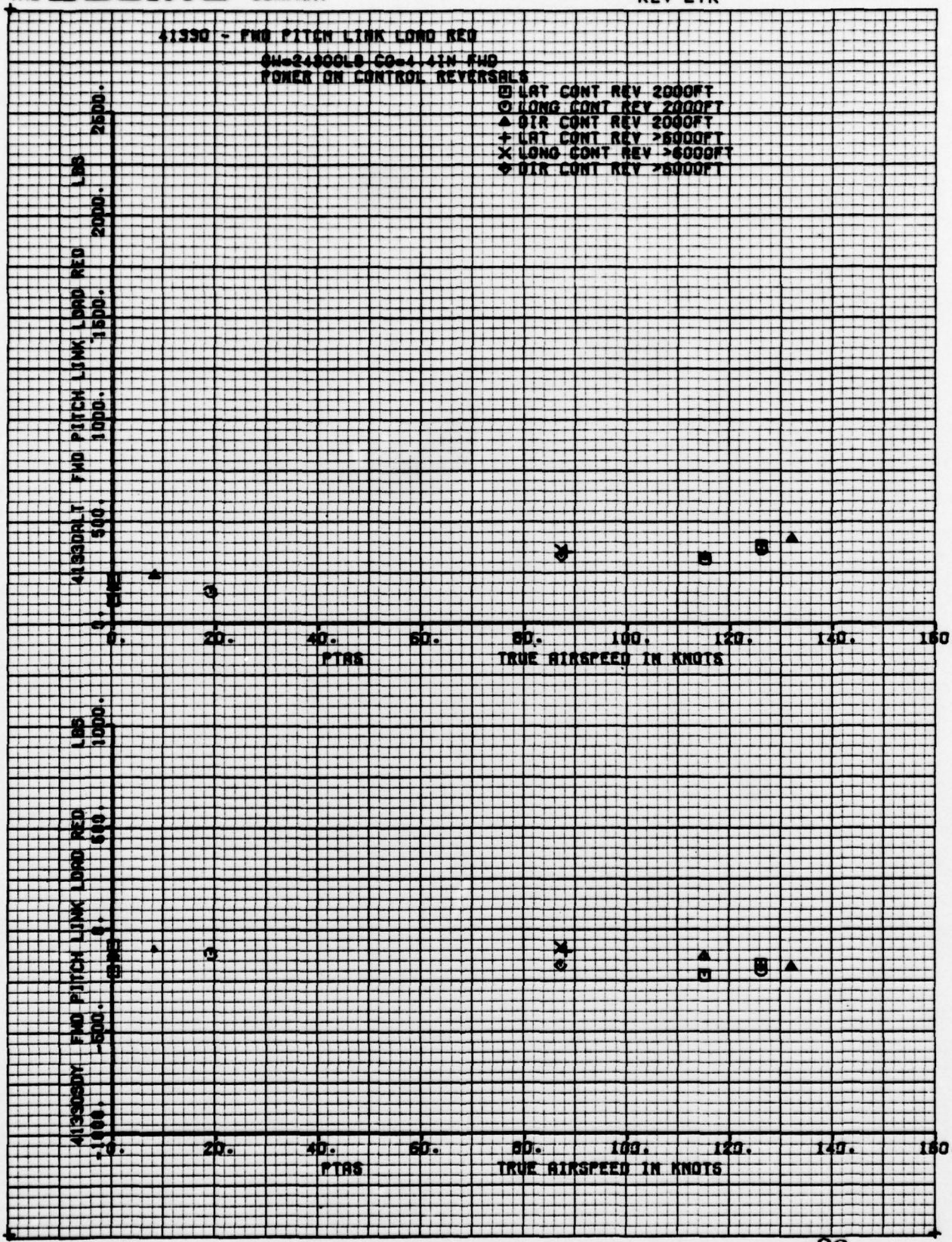


THE BOEING COMPANY

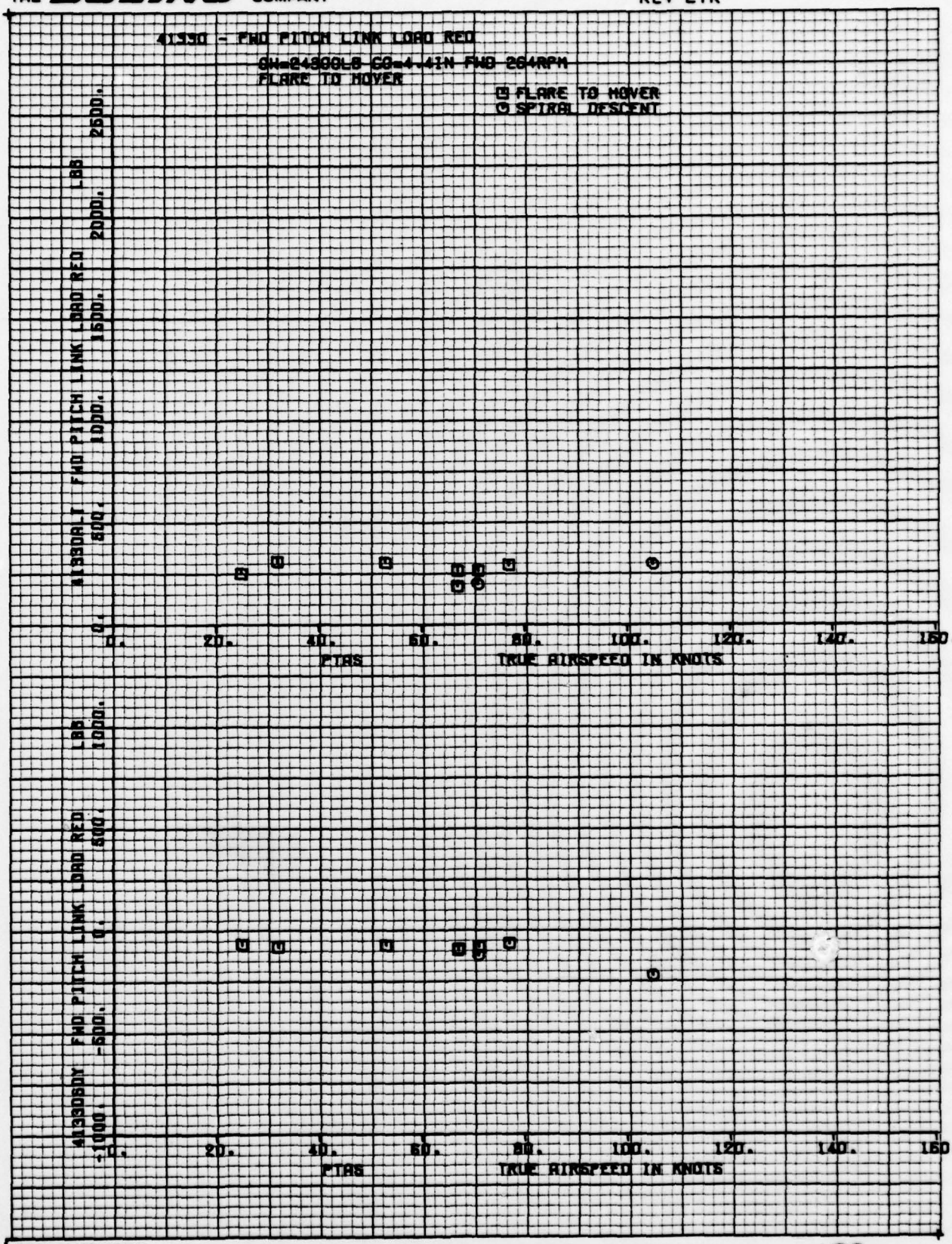


FORM 82300 (10/71)

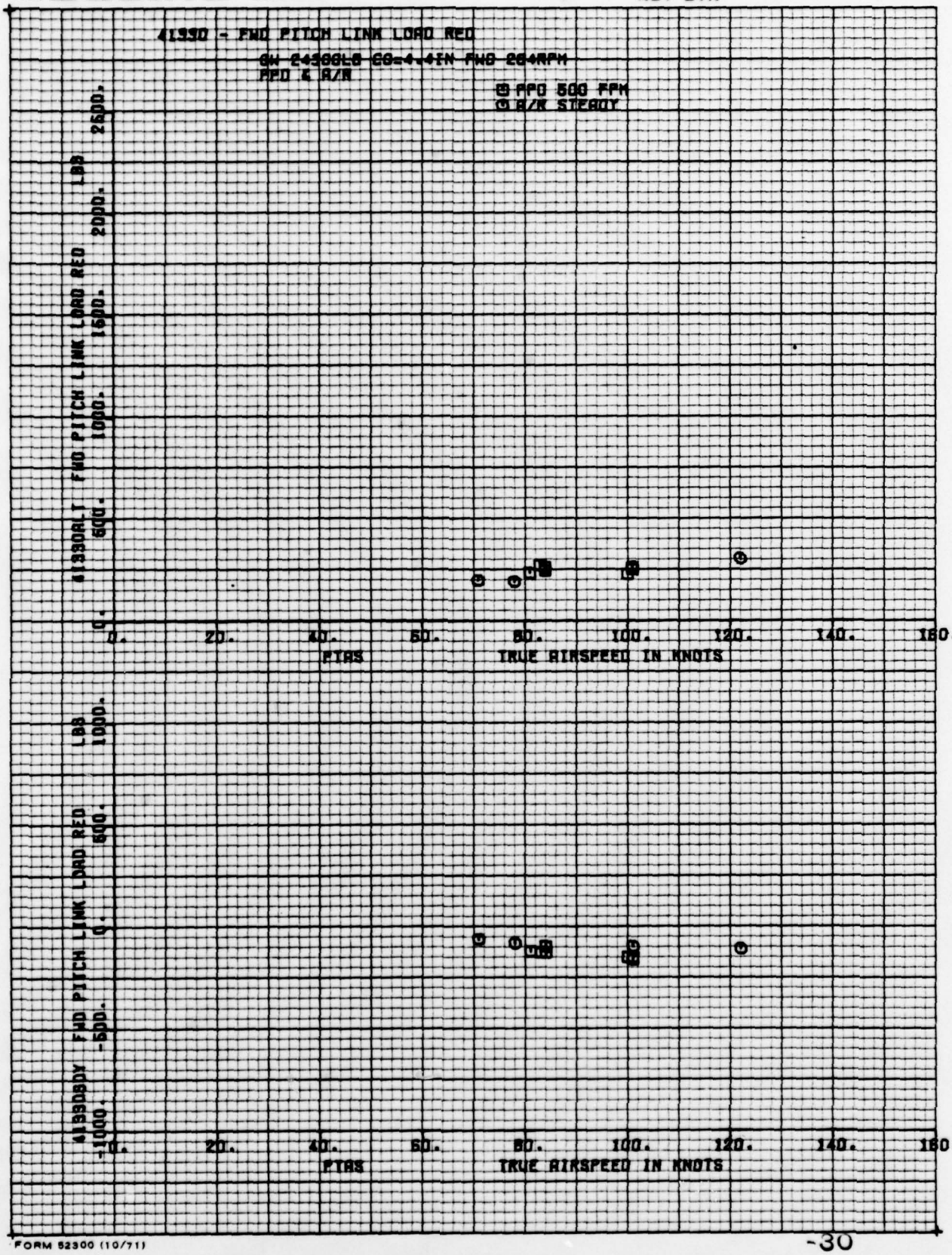
THE BOEING COMPANY

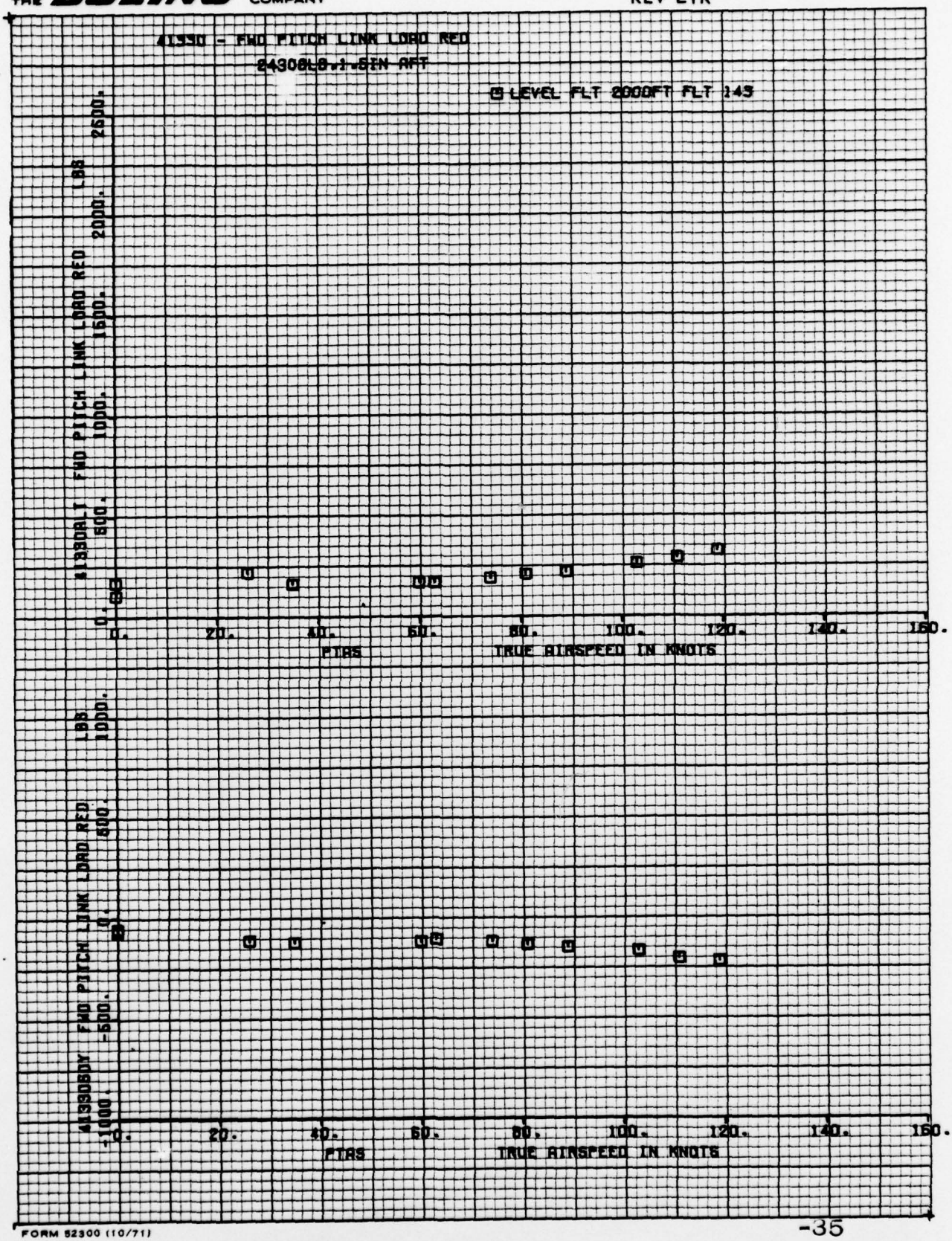


FORM 52300 (10/71)

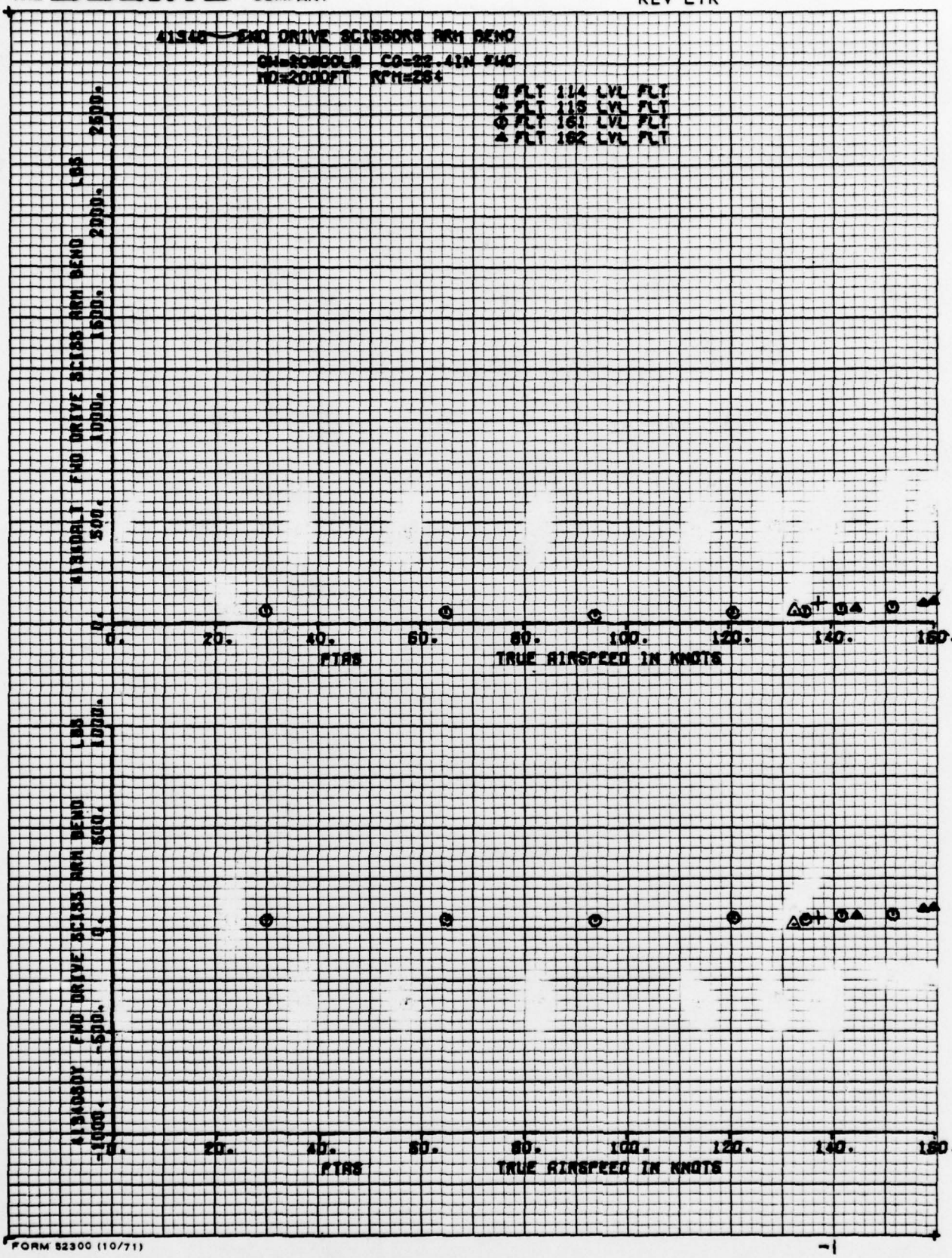

41330 - FWD PITCH LINK LOAD RED
GW=24300LB CG=4.41N FWD 264RPM
FLARE TO HOVER
FLARE TO HOVER
SPIRAL DESCENT
41330ALT FWD PITCH LINK LOAD RED LBS
2600.
2000.
1600.
1000.
800.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41330SDN FWD PITCH LINK LOAD RED LBS
1000.
800.
0.
-600.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

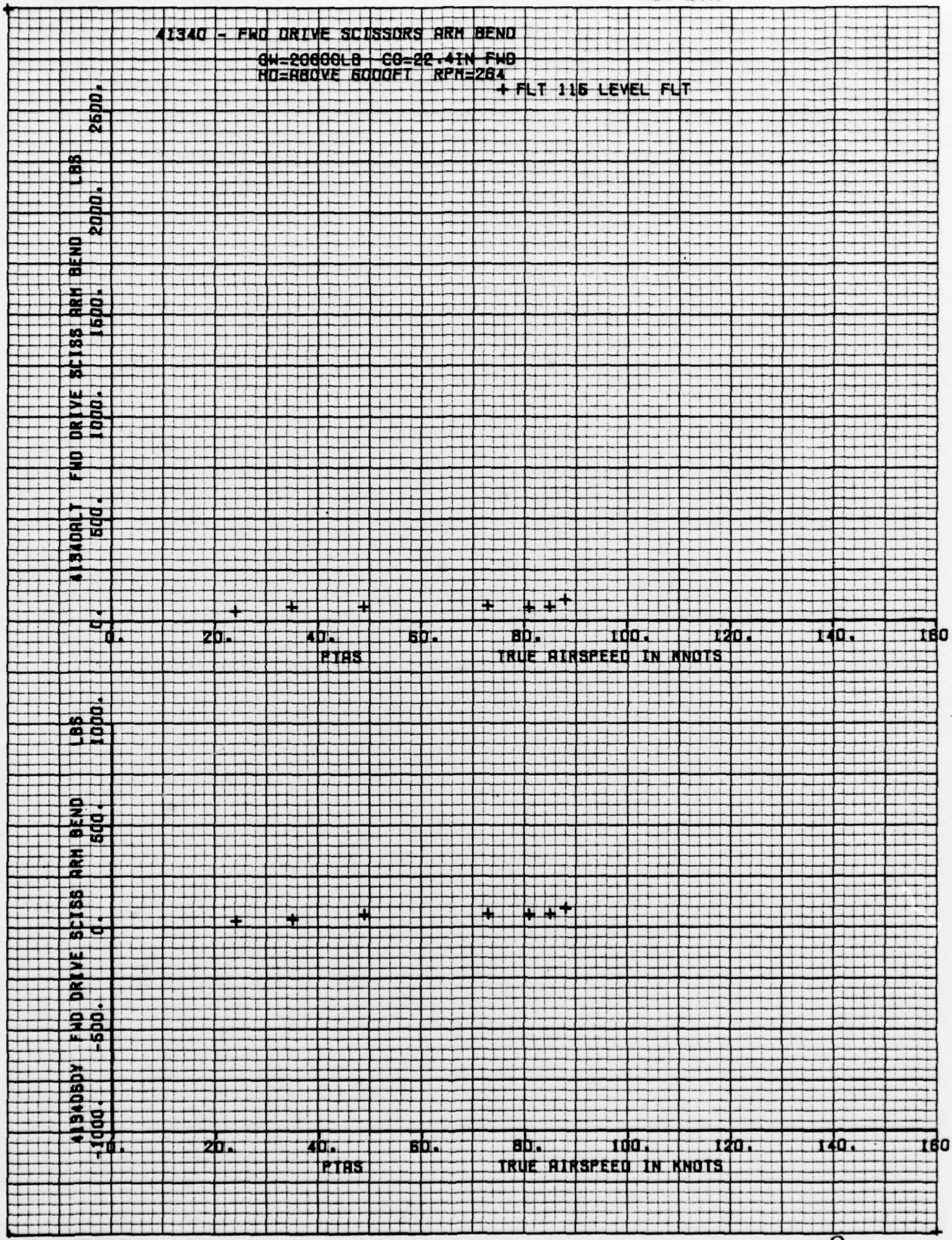



41330 - FWD PITCH LINK LOAD RED
243086L8v1.5IN AFT
LEVEL FLT 2000FT FLT 143
41330ALT FWD PITCH LINK LOAD RED LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS
41330BDY FWD PITCH LINK LOAD RED LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS

4.4 Forward Drive Scissors Arm


413548—FWD DRIVE SCISSORS ARM BEND
GW=20000LB CG=22.4IN FWD
ND=20000FT RPM=264
FLT 114 LVL FLT
FLT 115 LVL FLT
FLT 161 LVL FLT
FLT 162 LVL FLT
413548LT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS
413548BY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS

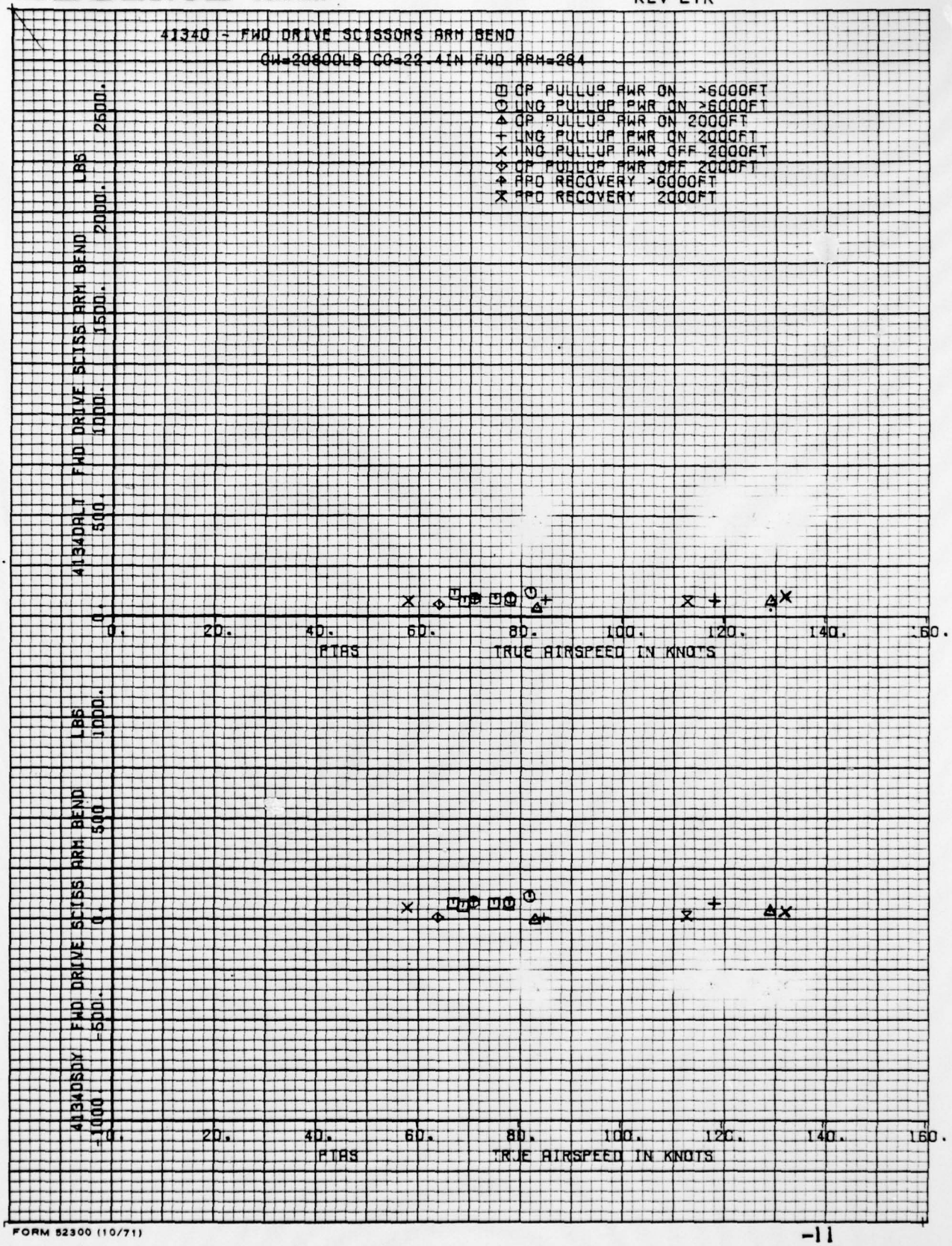
THE BOEING COMPANY

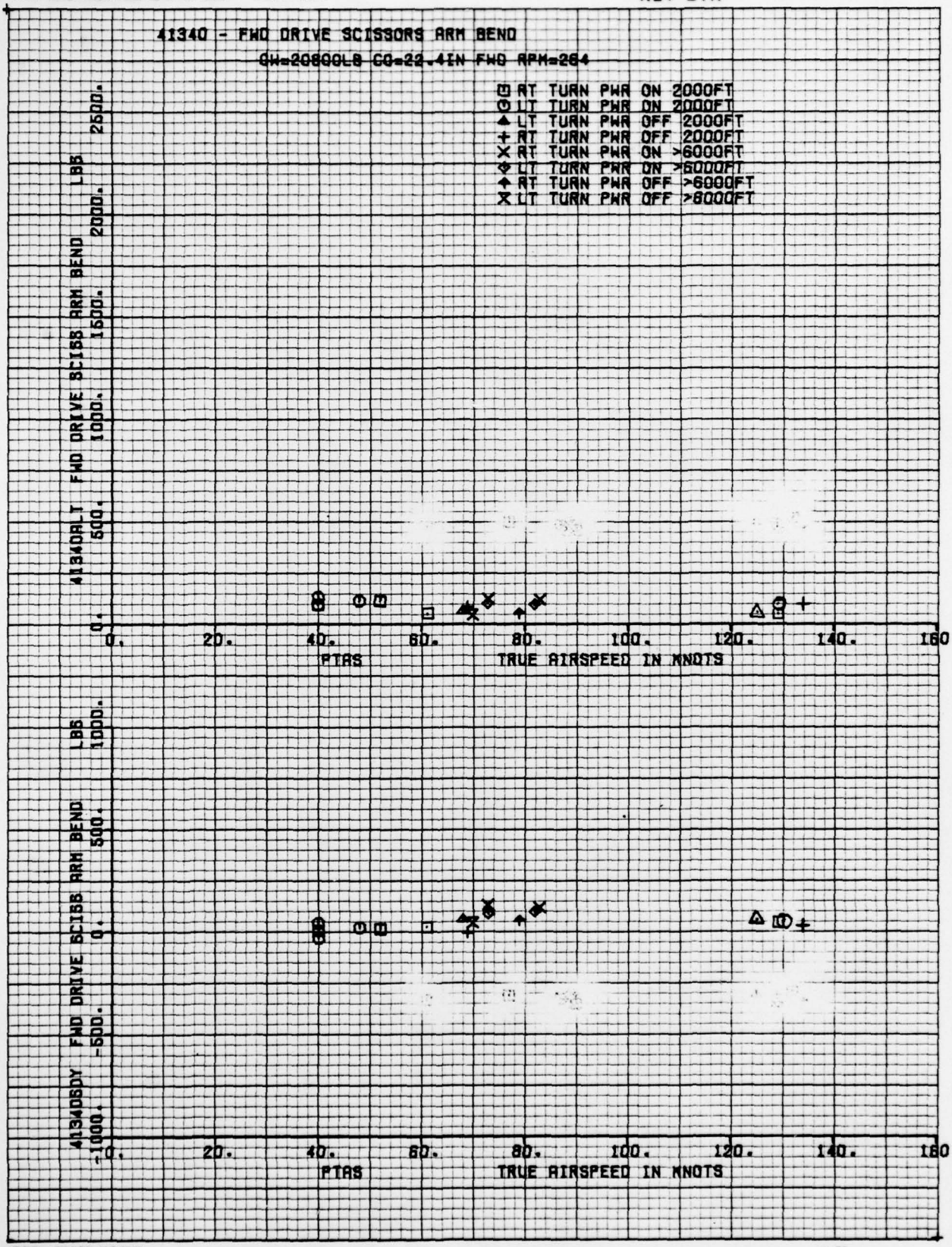


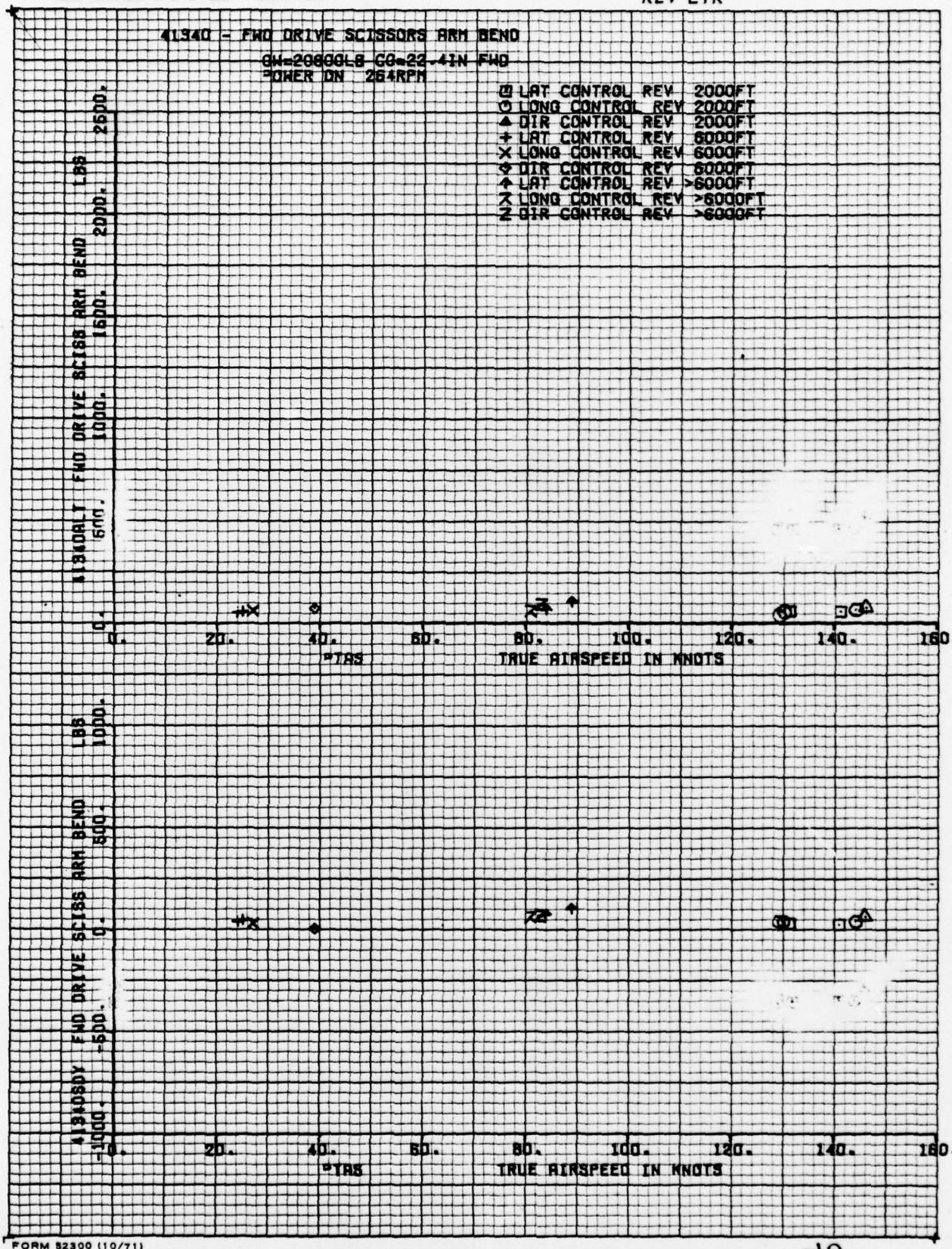
FORM 52300 (10/71)

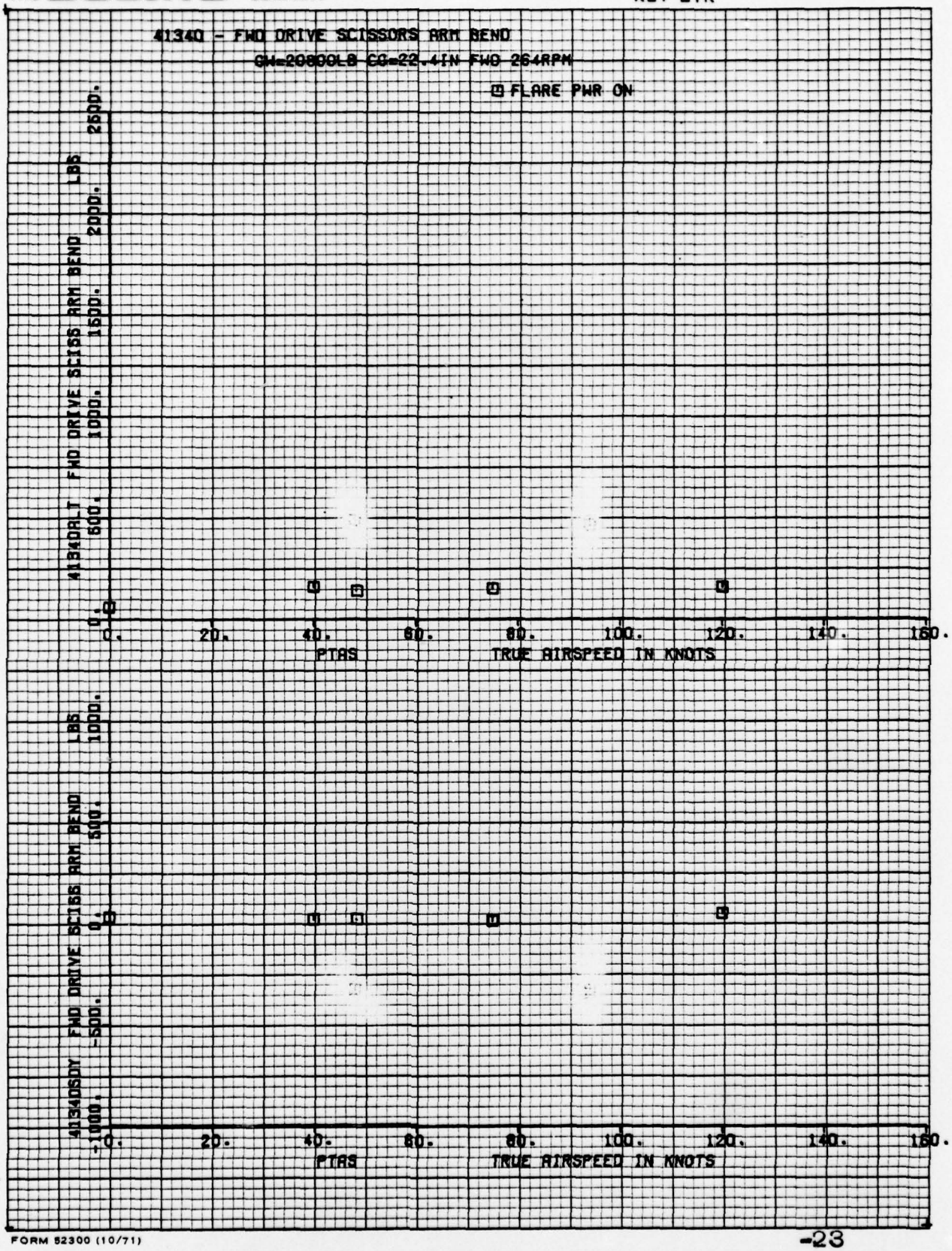
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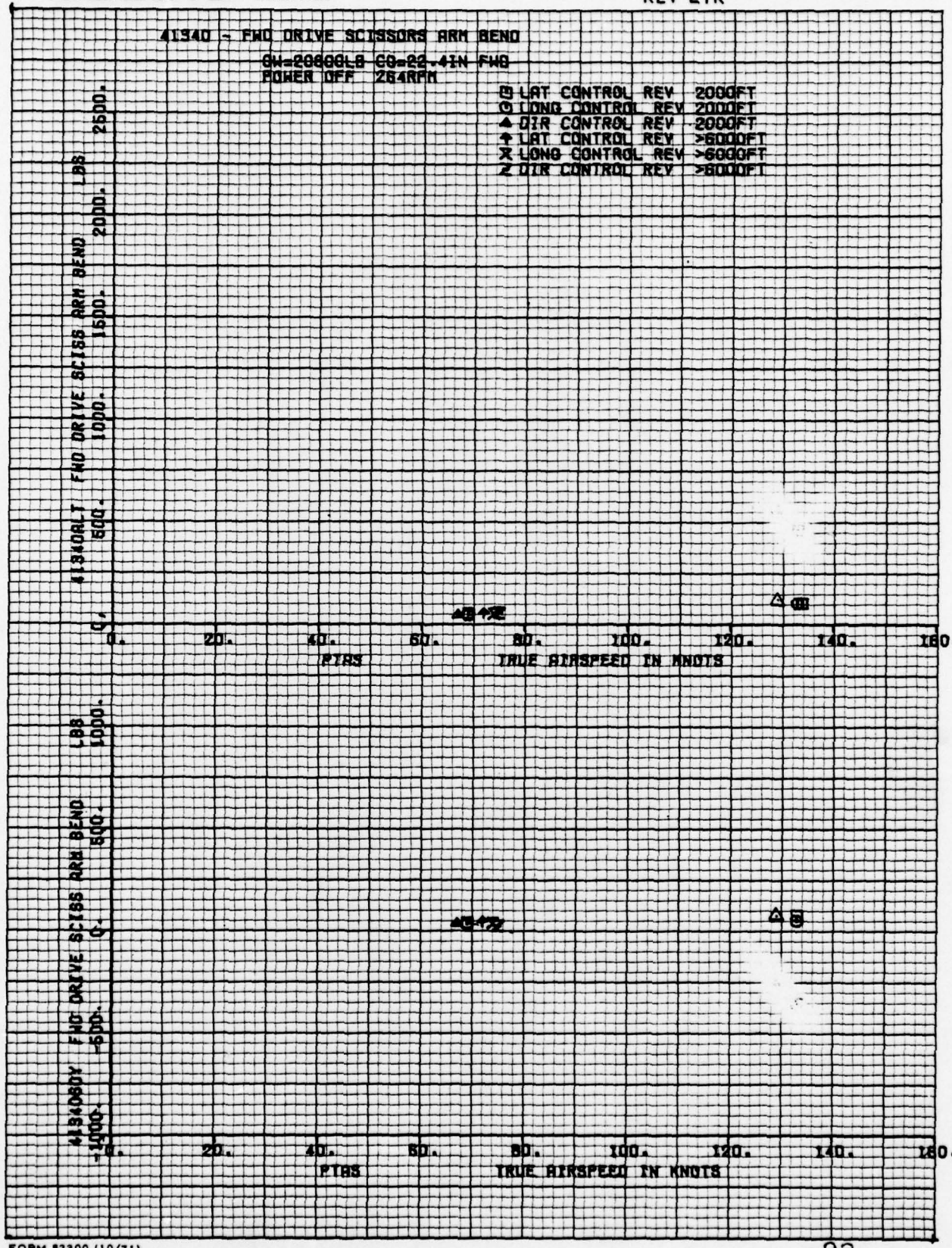
SHEET 122

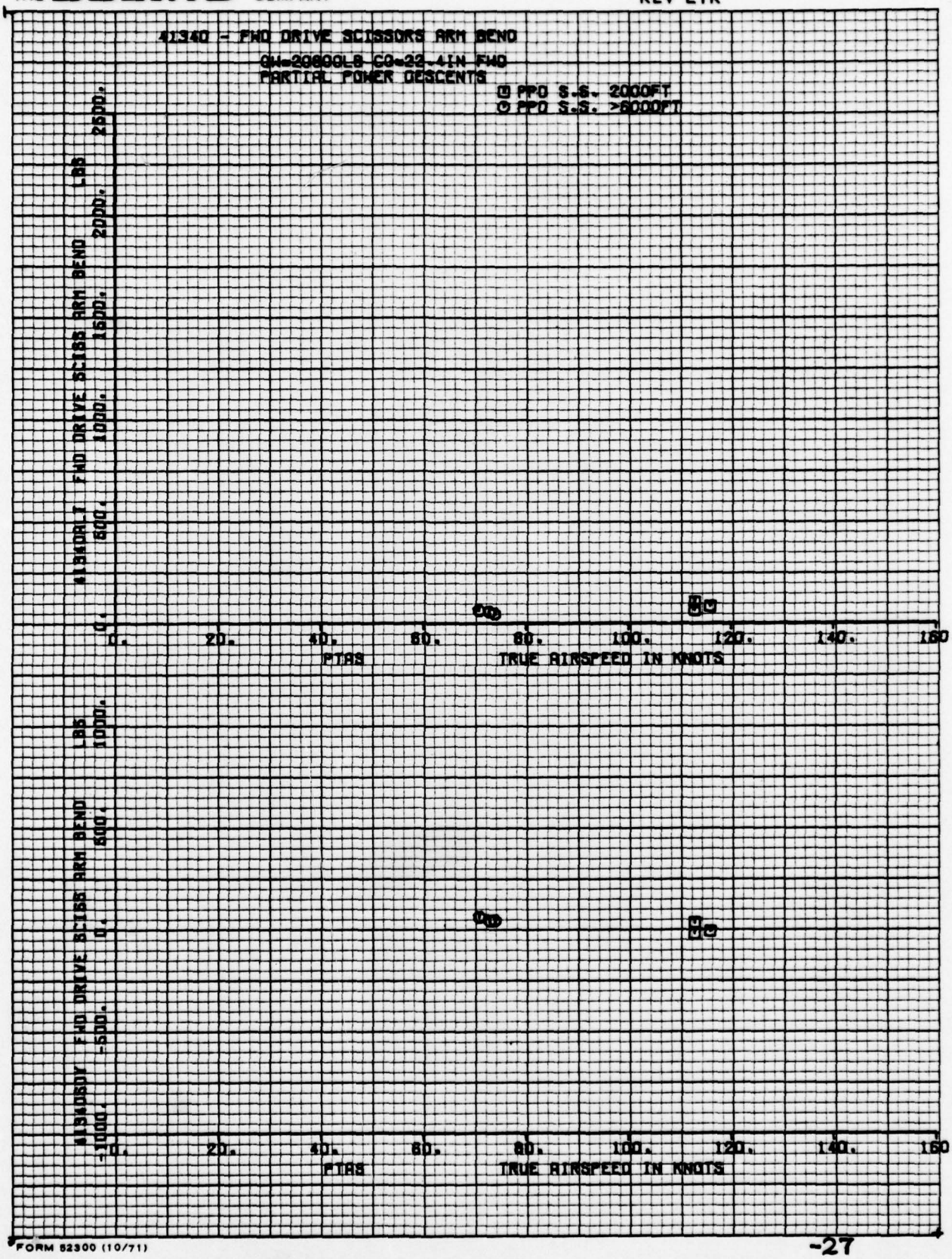

41340 - FWD DRIVE SCISSORS ARM BEND
GW=208000LB CG=22.4IN FWD ARM=284
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 2000FT
LNG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
APD RECOVERY >6000FT
APD RECOVERY 2000FT
4134DALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
4134DSDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS


41340 - FWD DRIVE SCISSORS ARM BEND
GW=208000LB CG=22.4IN FWD RPM=264
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41340BDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


41340 - FWD DRIVE SCISSORS ARM BEND
GW=20000LB CG=22.4IN FWD
POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LONG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2600.
2000.
1600.
1000.
600.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
*TAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
*TAS
TRUE AIRSPEED IN KNOTS


41340 - FWD DRIVE SCISSORS ARM BEND
GW=208000LB CG=22.4IN FWD 264RPM
FLARE PWR ON
41340RLT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41340DSDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


41940 - FWD DRIVE SCISSORS ARM BEND
GW=20000LB CG=22.4IN FWD
POWER OFF 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41340DIY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

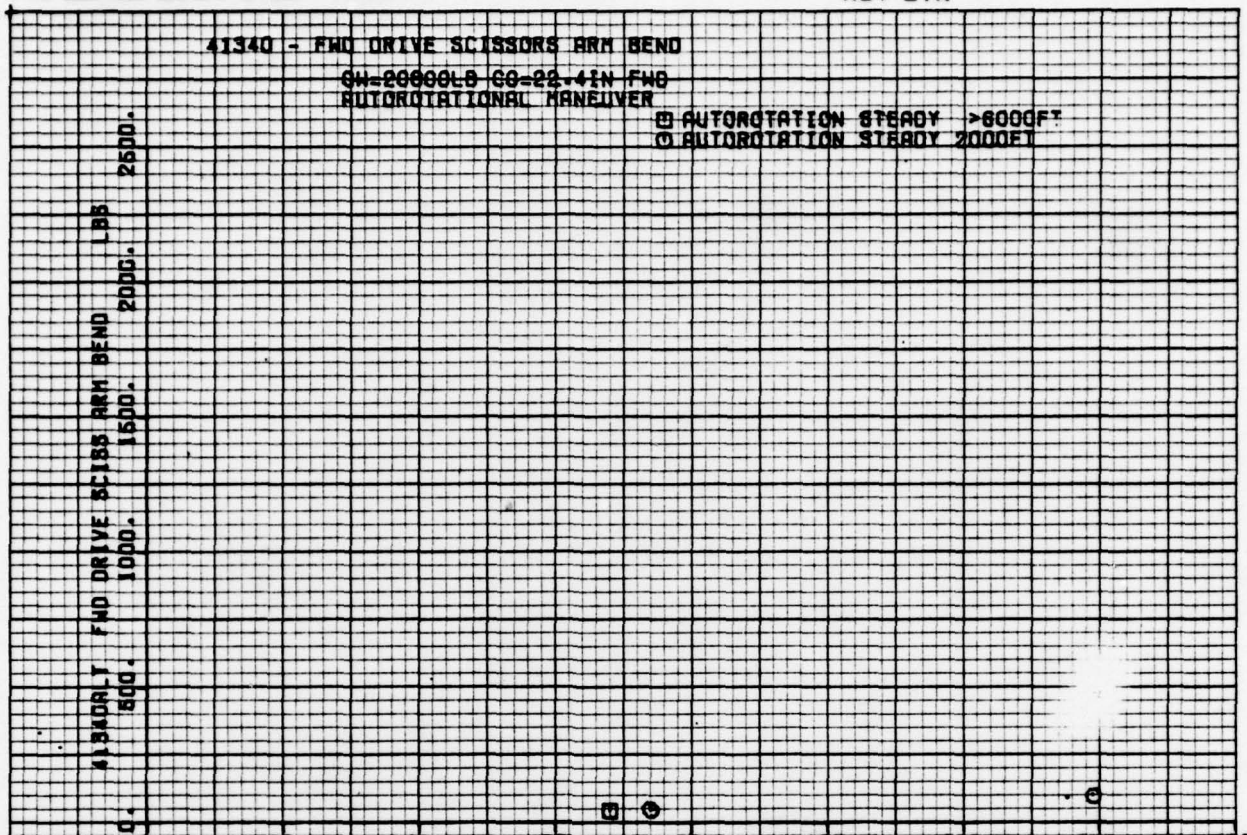

41340 - FWD DRIVE SCISSORS ARM BEND
GW=20800LB CG=22.4IN FWD
PARTIAL POWER DESCENTS
PPD S.S. 2000FT
PPD S.S. >6000FT
#1340RLT FWD DRIVE SCISS ARM BEND LBS
2600.
2000.
1600.
1000.
800.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
#1340DWN FWD DRIVE SCISS ARM BEND LBS
1000.
800.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

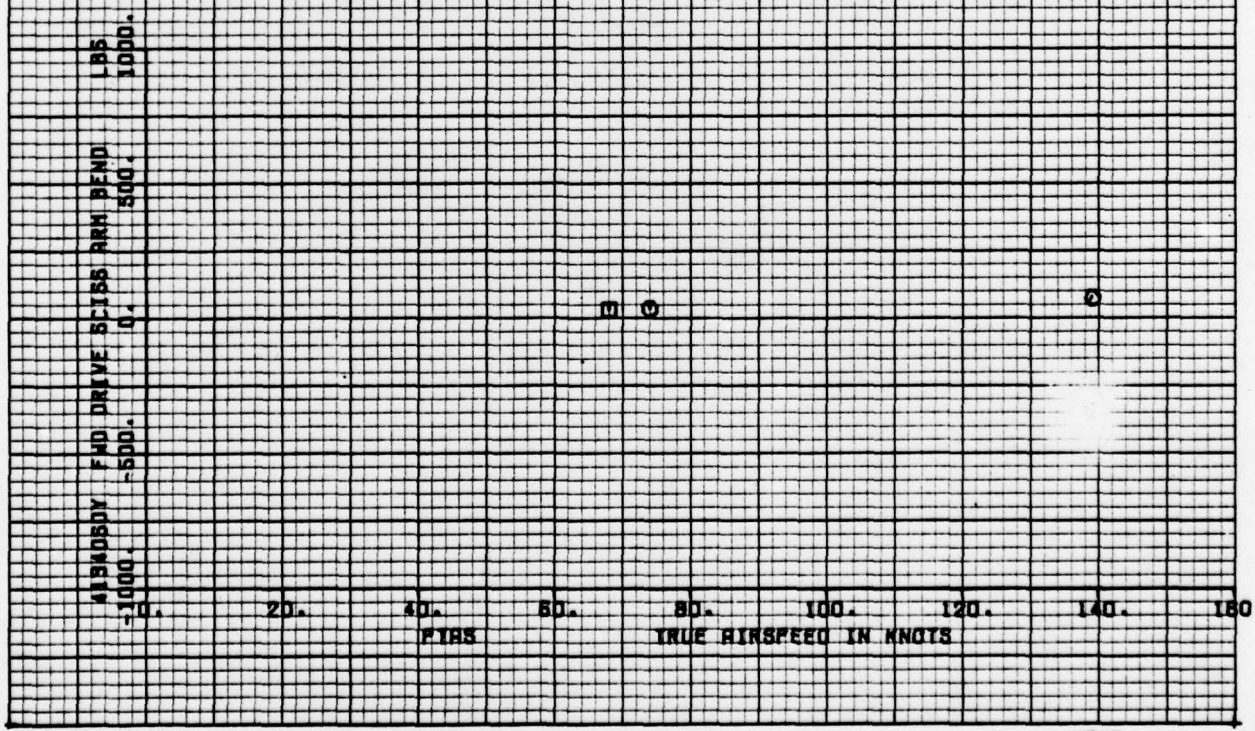
THE BOEING COMPANY

41340 - FWD DRIVE SCISSORS ARM BEND

~~GW=20000LB CG=22.4IN FWD~~
AUTOROTATIONAL MANEUVER

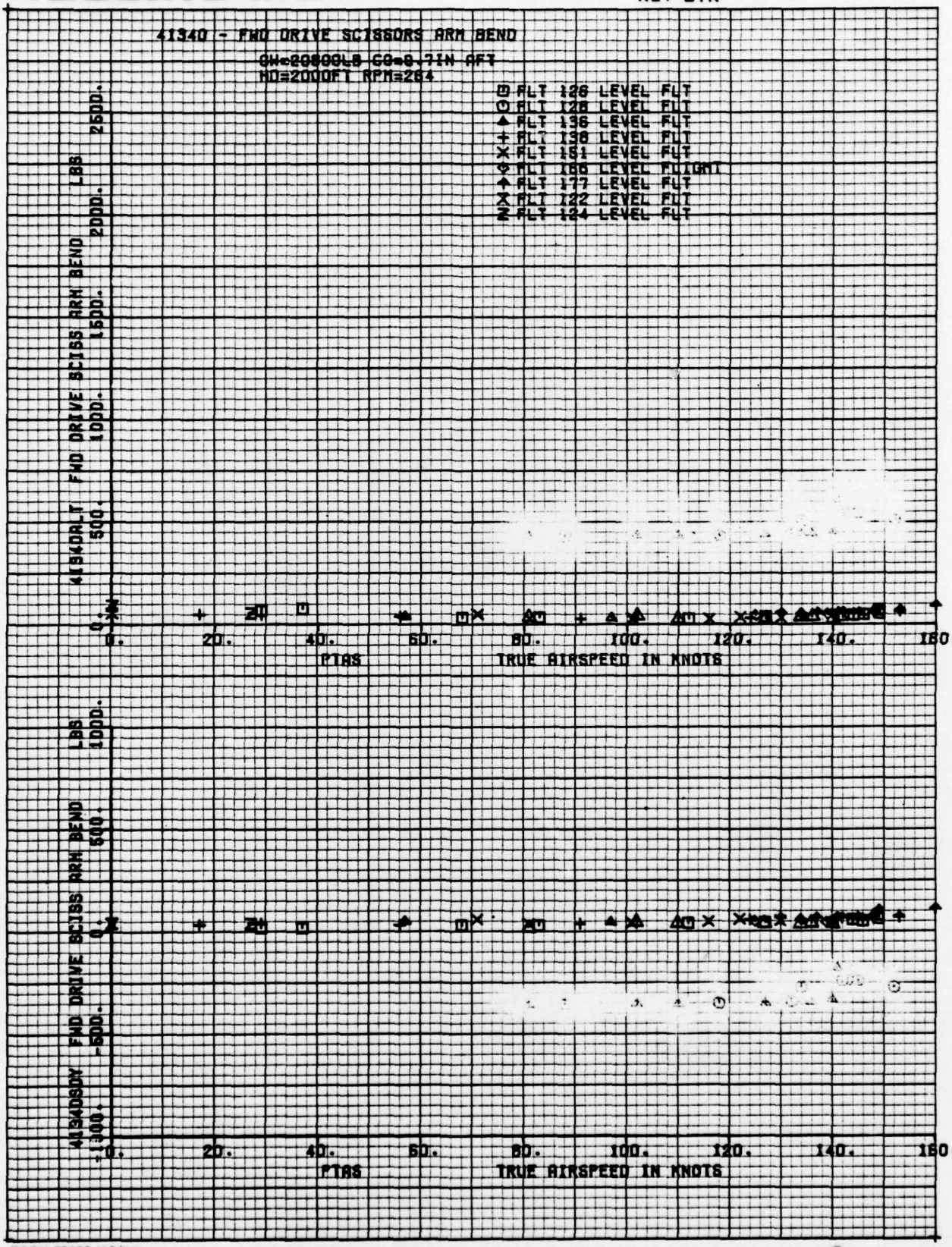
M AUTOROTATION STEADY >6000FT
C AUTOROTATION STEADY 2000FT



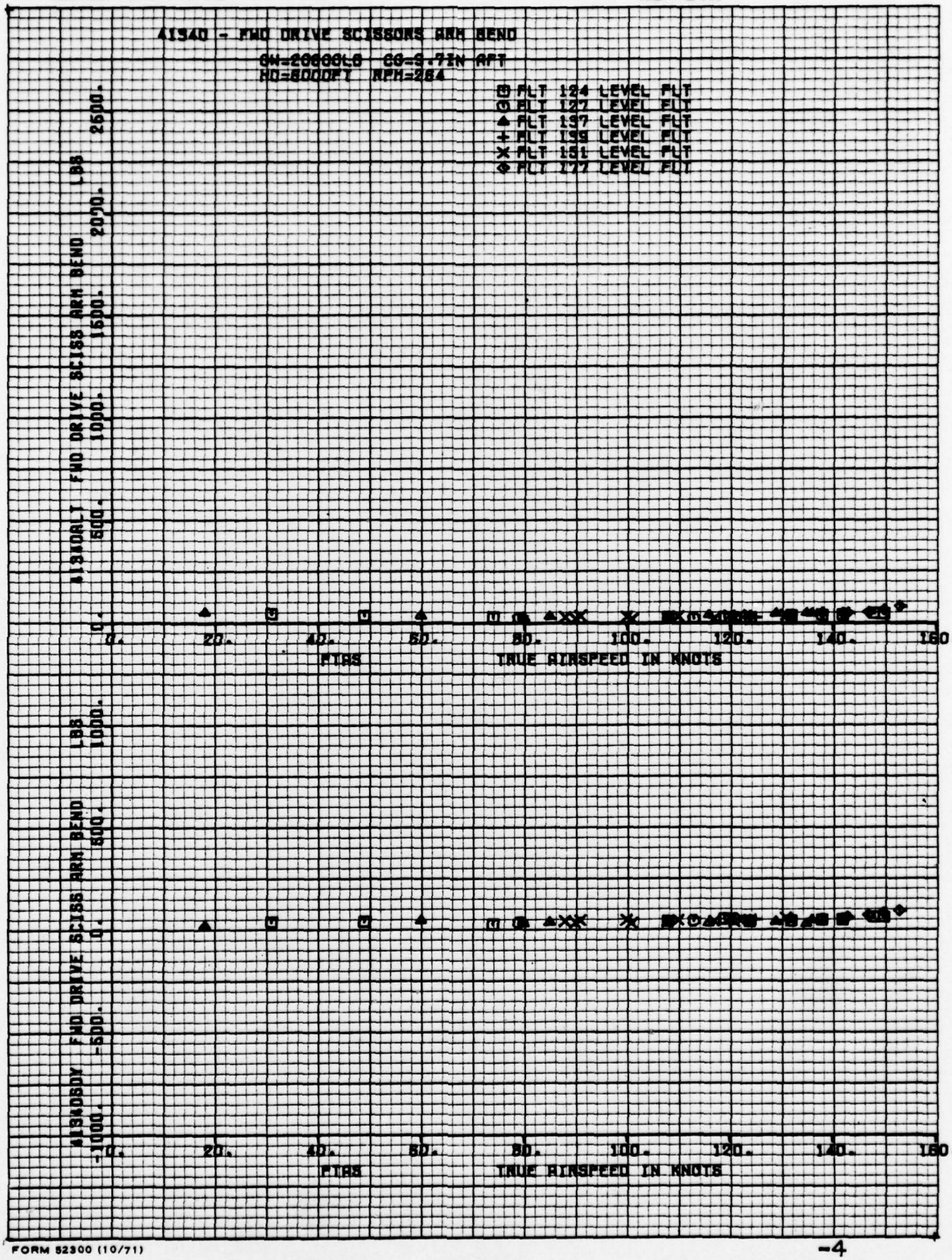


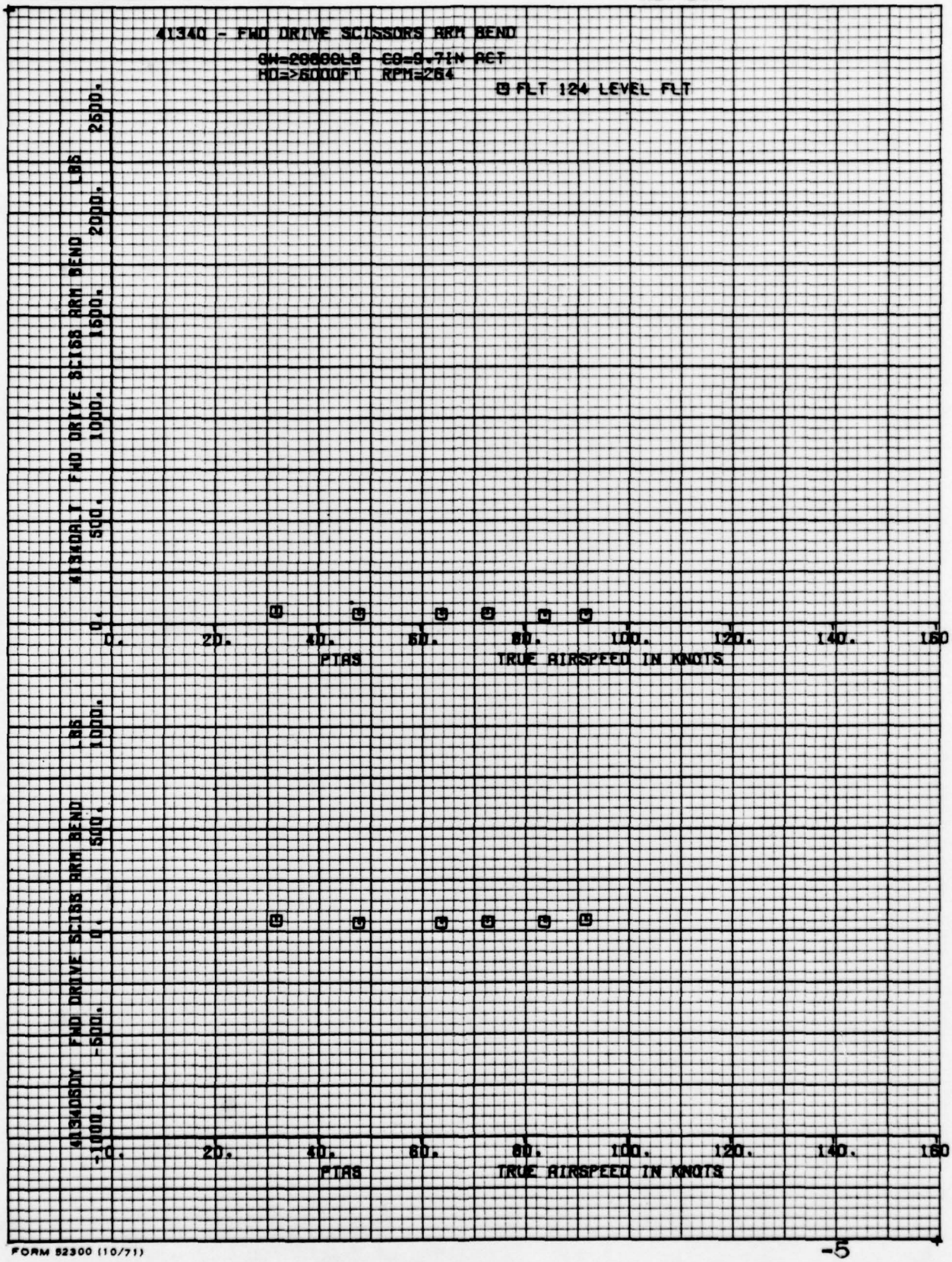
FORM 52300 (10/71)

THE BOEING COMPANY

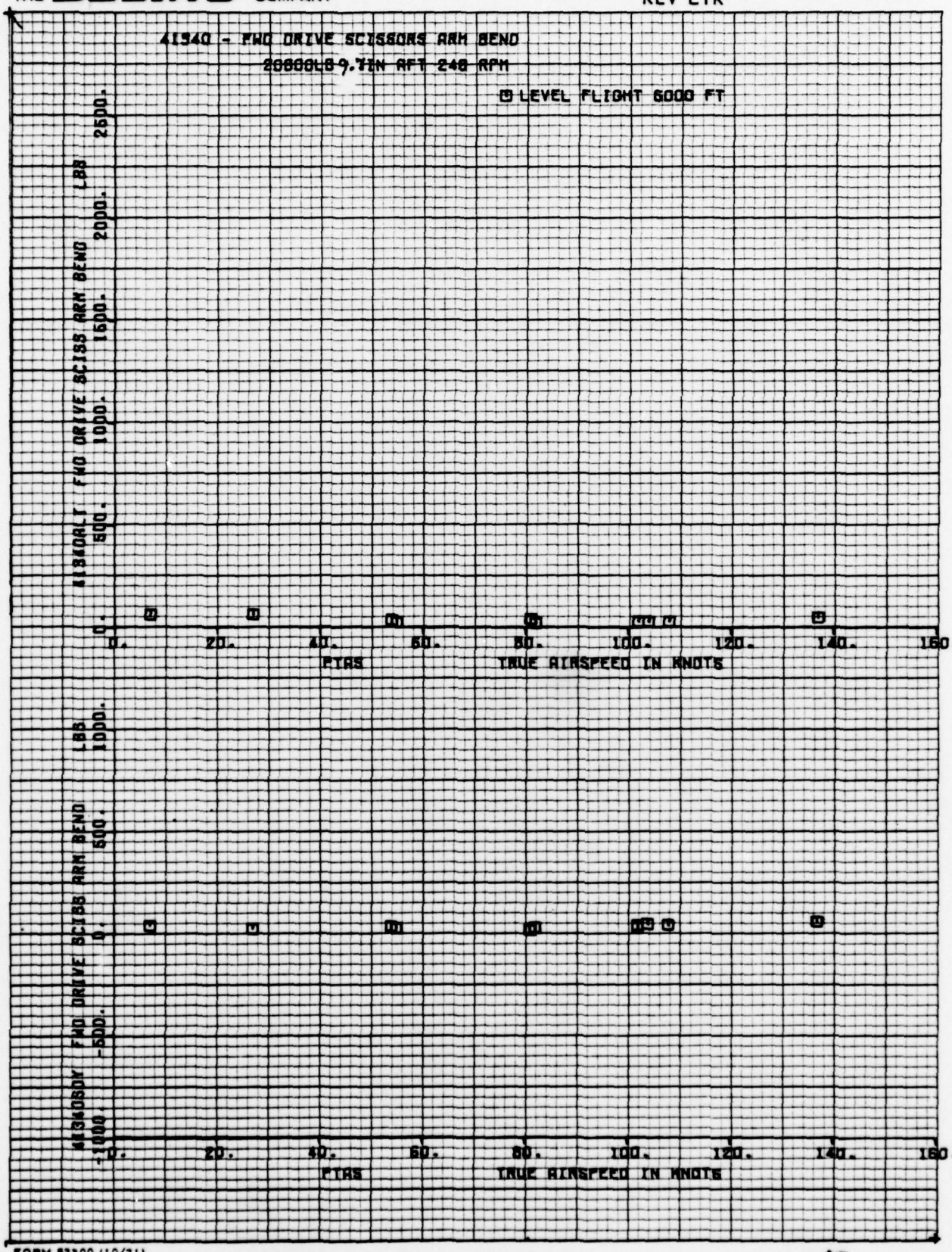


FORM 52300 (10/71)

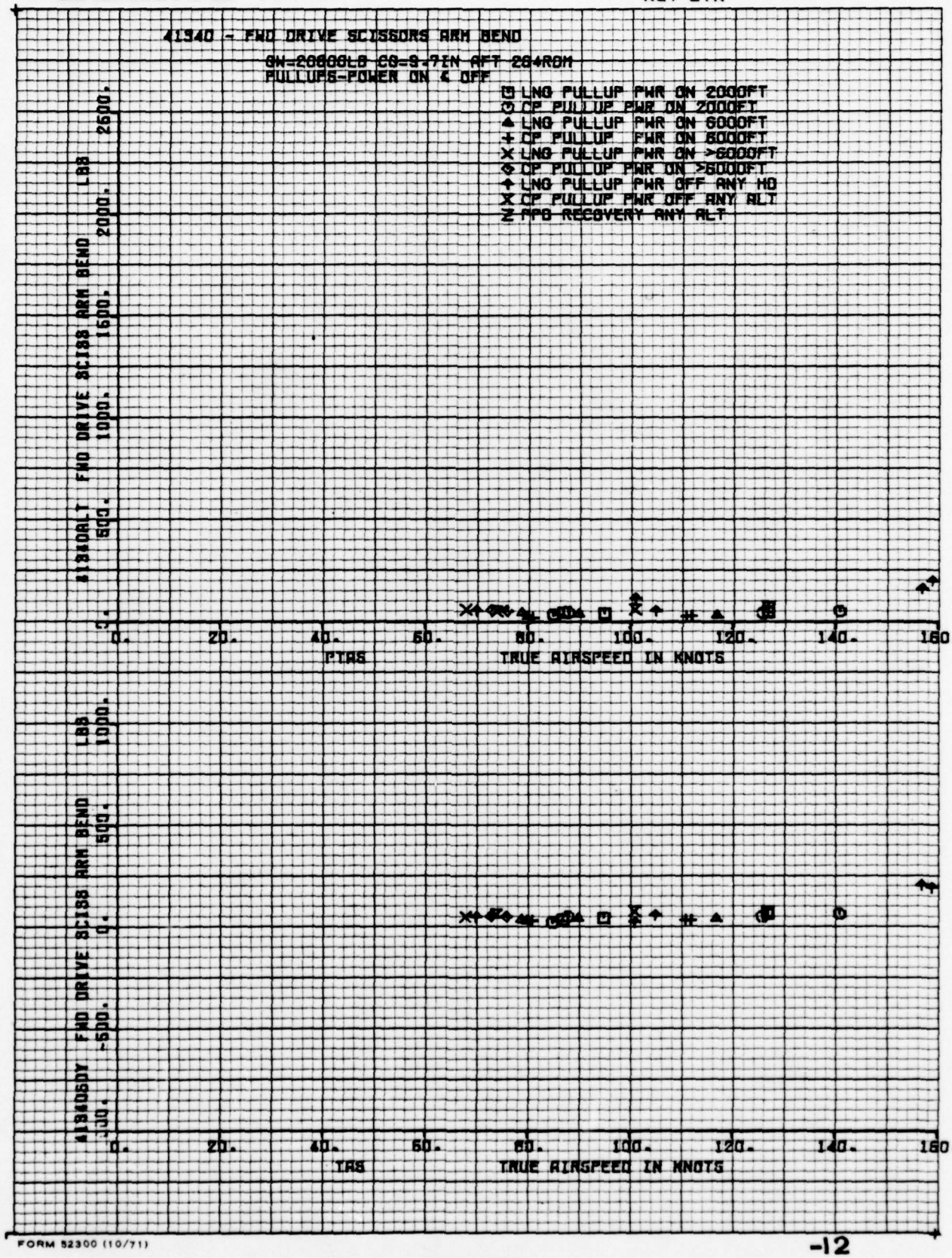

41340 - FWD DRIVE SCISSORS ARM BEND
GW=20000LB CG=6.7IN AFT
HO=8000FT RPM=264
FLT 124 LEVEL FLT
FLT 127 LEVEL FLT
FLT 137 LEVEL FLT
FLT 139 LEVEL FLT
FLT 151 LEVEL FLT
FLT 177 LEVEL FLT
413401LT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
413402BOY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS


41340 - FWD DRIVE SCISSORS ARM BEND
GW=20000LB CG=9.71N ACT
HO=>5000FT RPM=264
FLT 124 LEVEL FLT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS

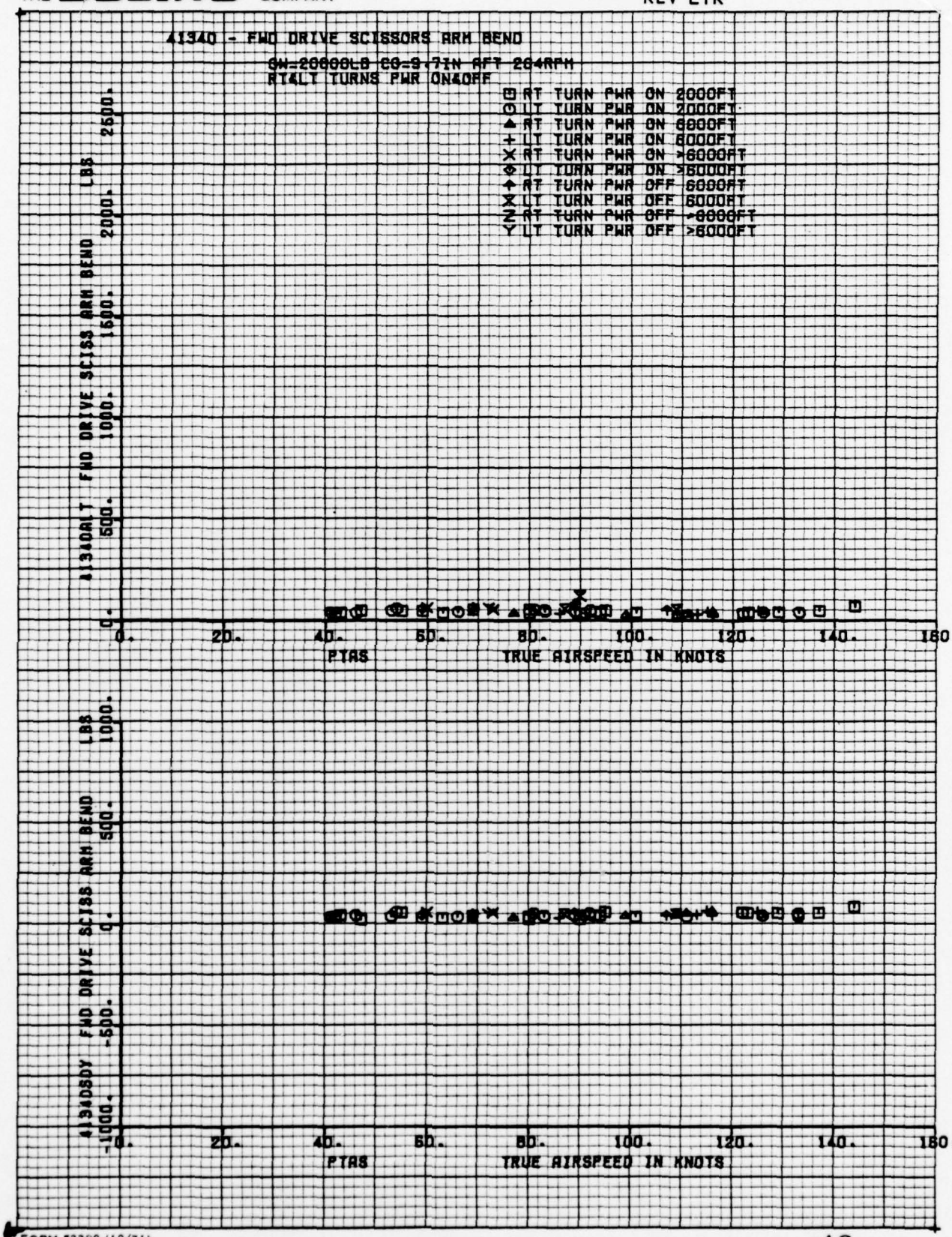
THE BOEING COMPANY

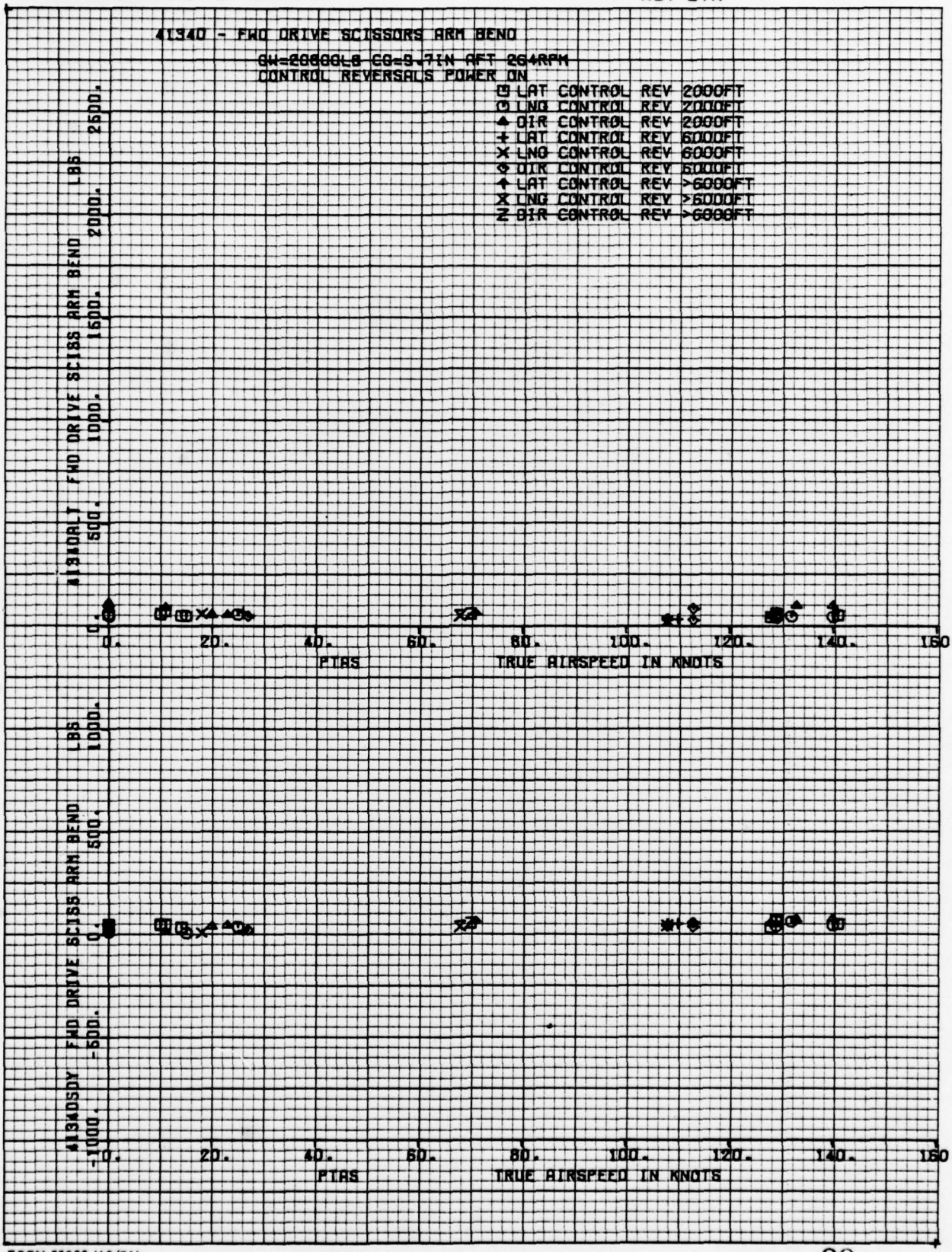


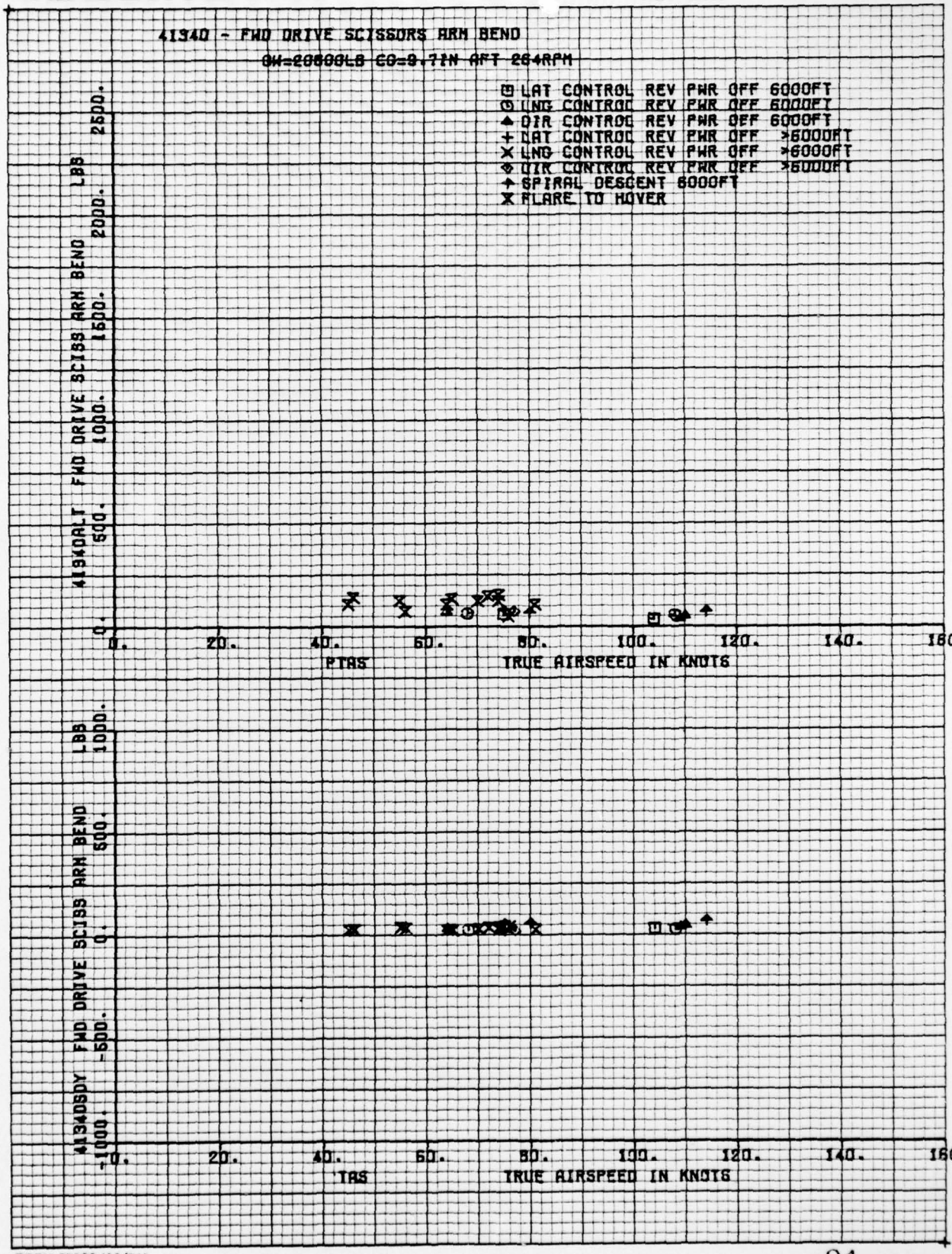
THE BOEING COMPANY

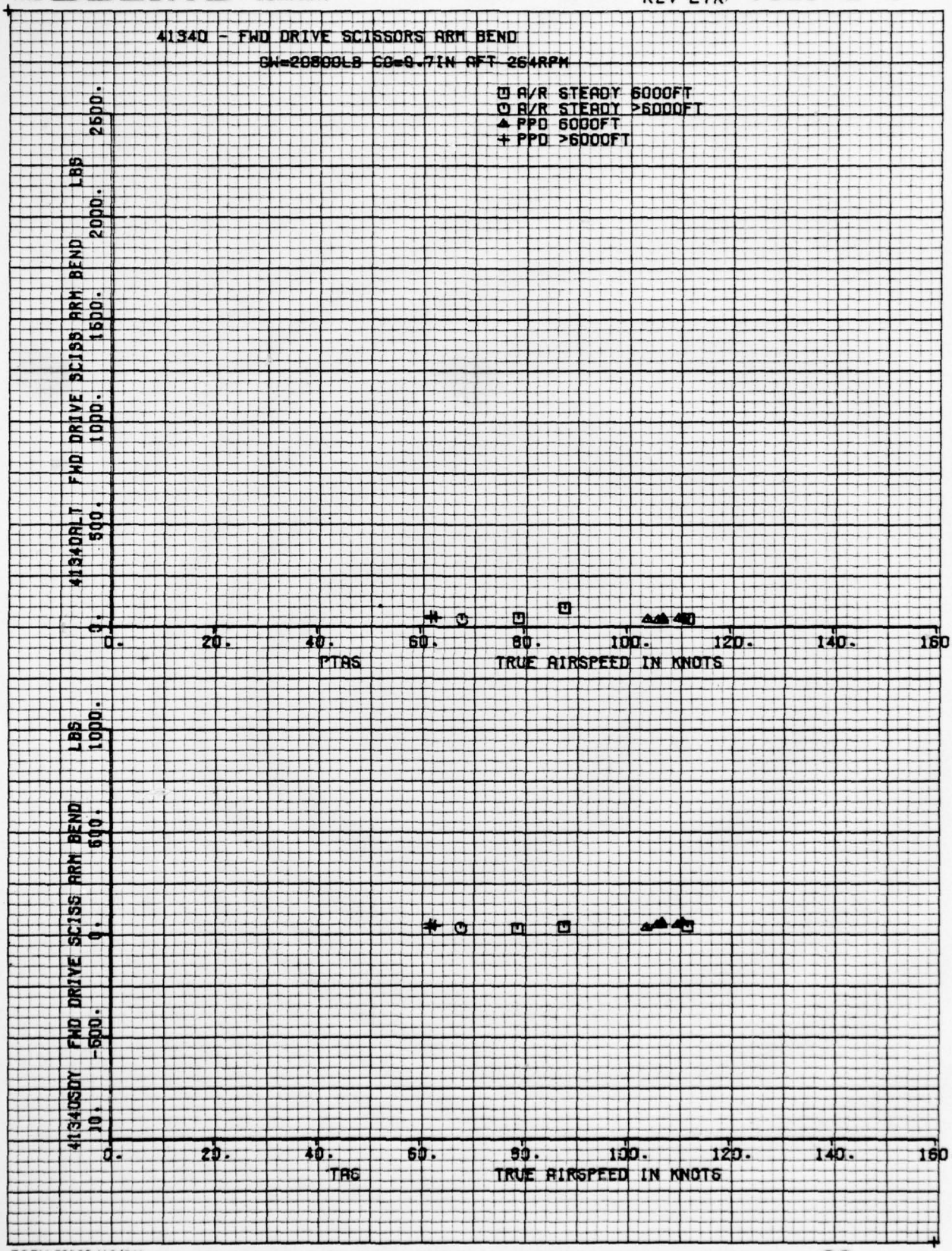


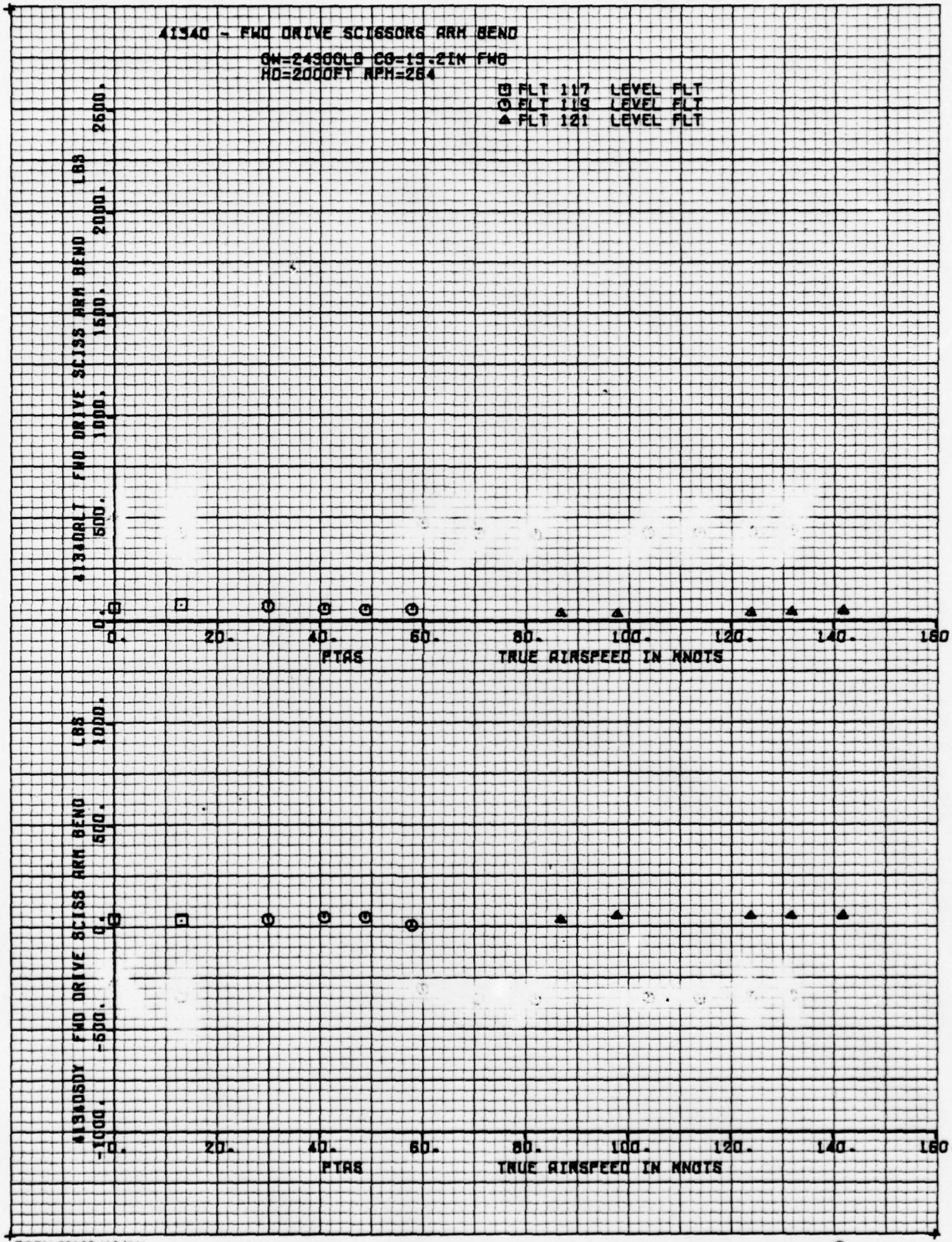
FORM 52300 (10/71)

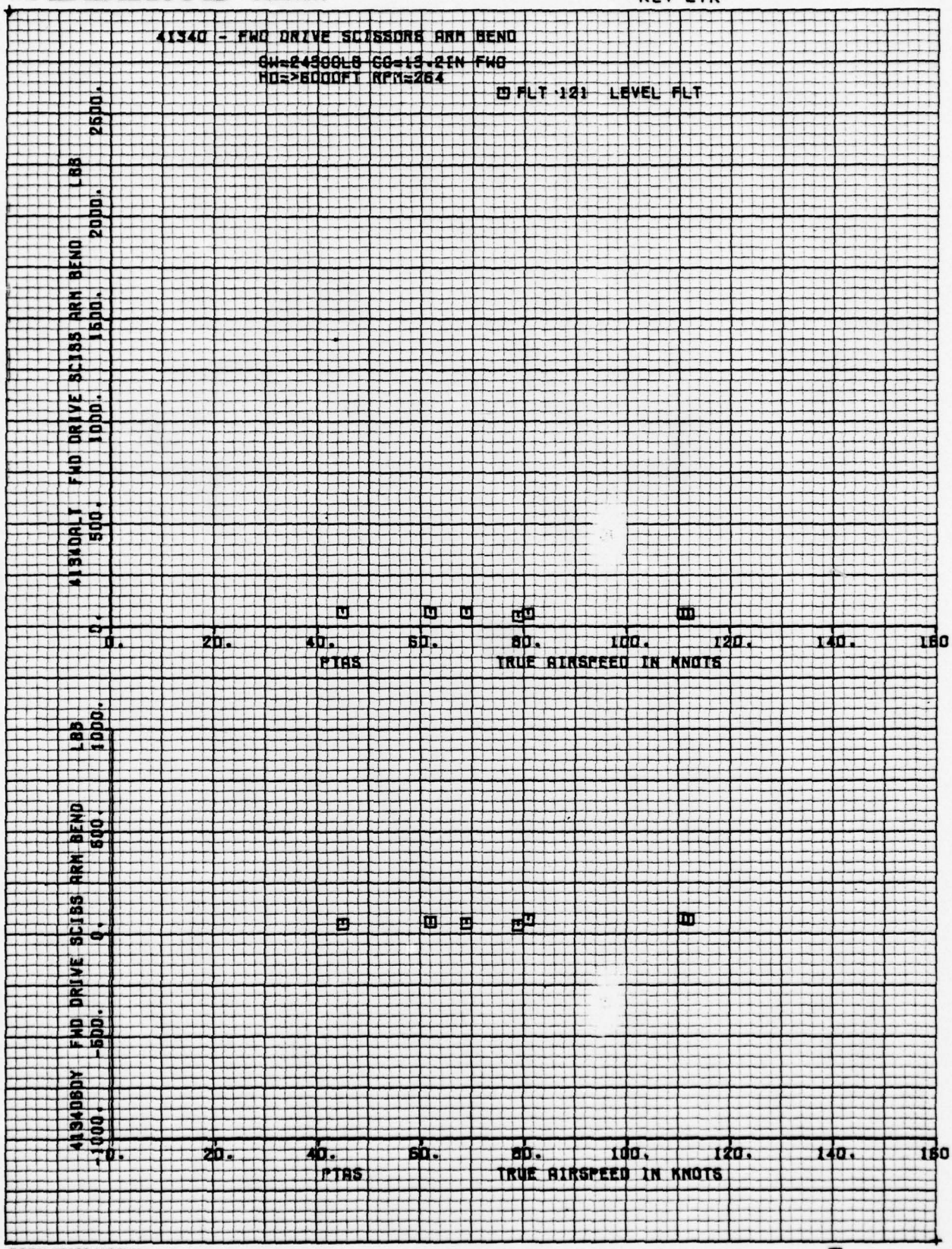

41340 - FWD DRIVE SCISSORS ARM BEND
GW=20000LB CG=9.71IN AFT 264RPM
RT&LT TURNS PWR ON&OFF
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
RT TURN PWR ON 6000FT
LT TURN PWR ON 6000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF 6000FT
LT TURN PWR OFF 6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

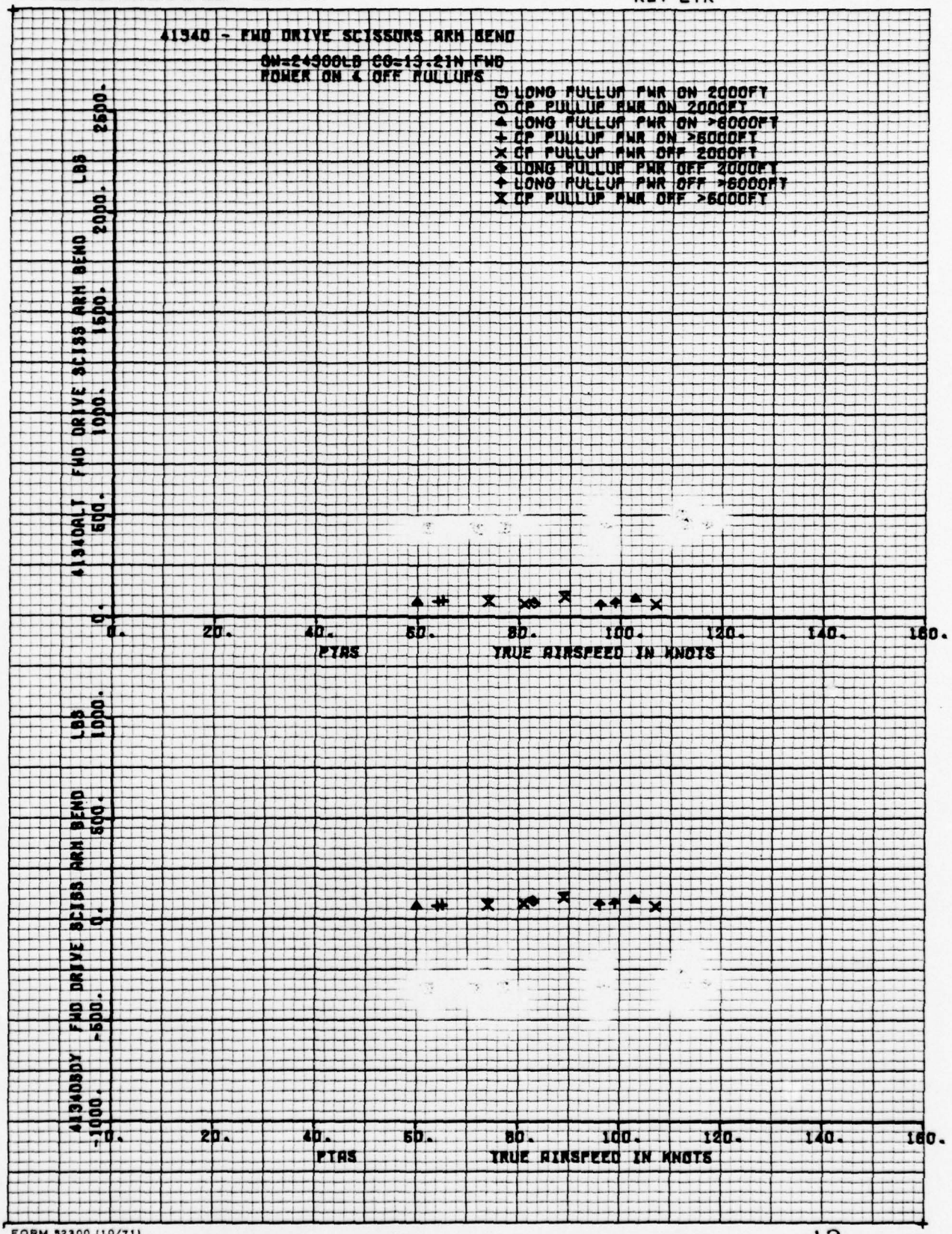

41340 - FWD DRIVE SCISSORS ARM BEND
GW=200000LB CG=9.7IN AFT 264RPM
CONTROL REVERSALS POWER ON
LAT CONTROL REV 2000FT
LNG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LNG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LNG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
413401LT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
413405DY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

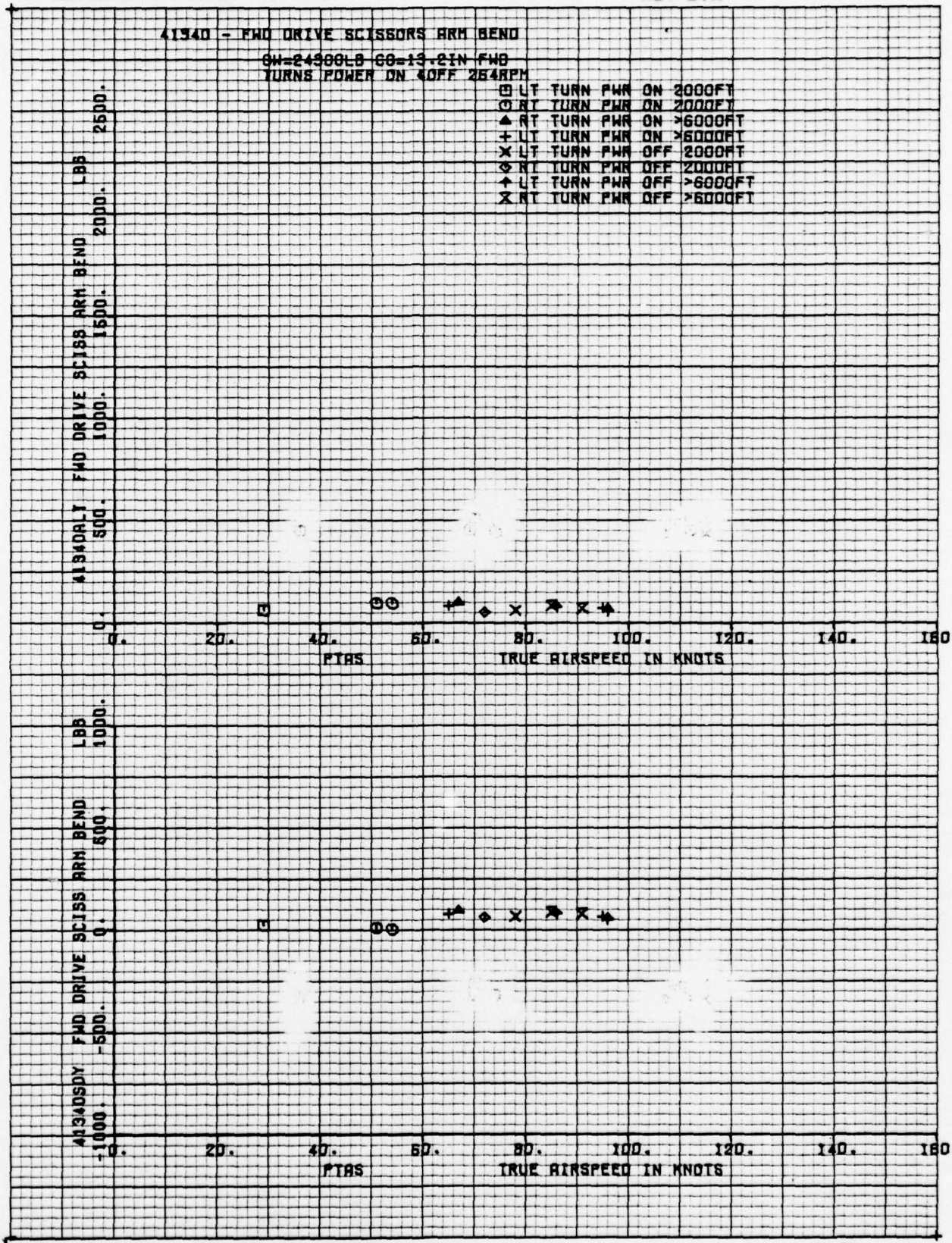

41340 - FWD DRIVE SCISSORS ARM BEND
GW=20600LB CG=9.7IN AFT 264RPM
LAT CONTROL REV PWR OFF 6000FT
LNG CONTROL REV PWR OFF 6000FT
DIR CONTROL REV PWR OFF 6000FT
LAT CONTROL REV PWR OFF >6000FT
LNG CONTROL REV PWR OFF >6000FT
DIR CONTROL REV PWR OFF >6000FT
SPIRAL DESCENT 6000FT
FLARE TO HOVER
4134DALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
4134DSDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
TAS
TRUE AIRSPEED IN KNOTS

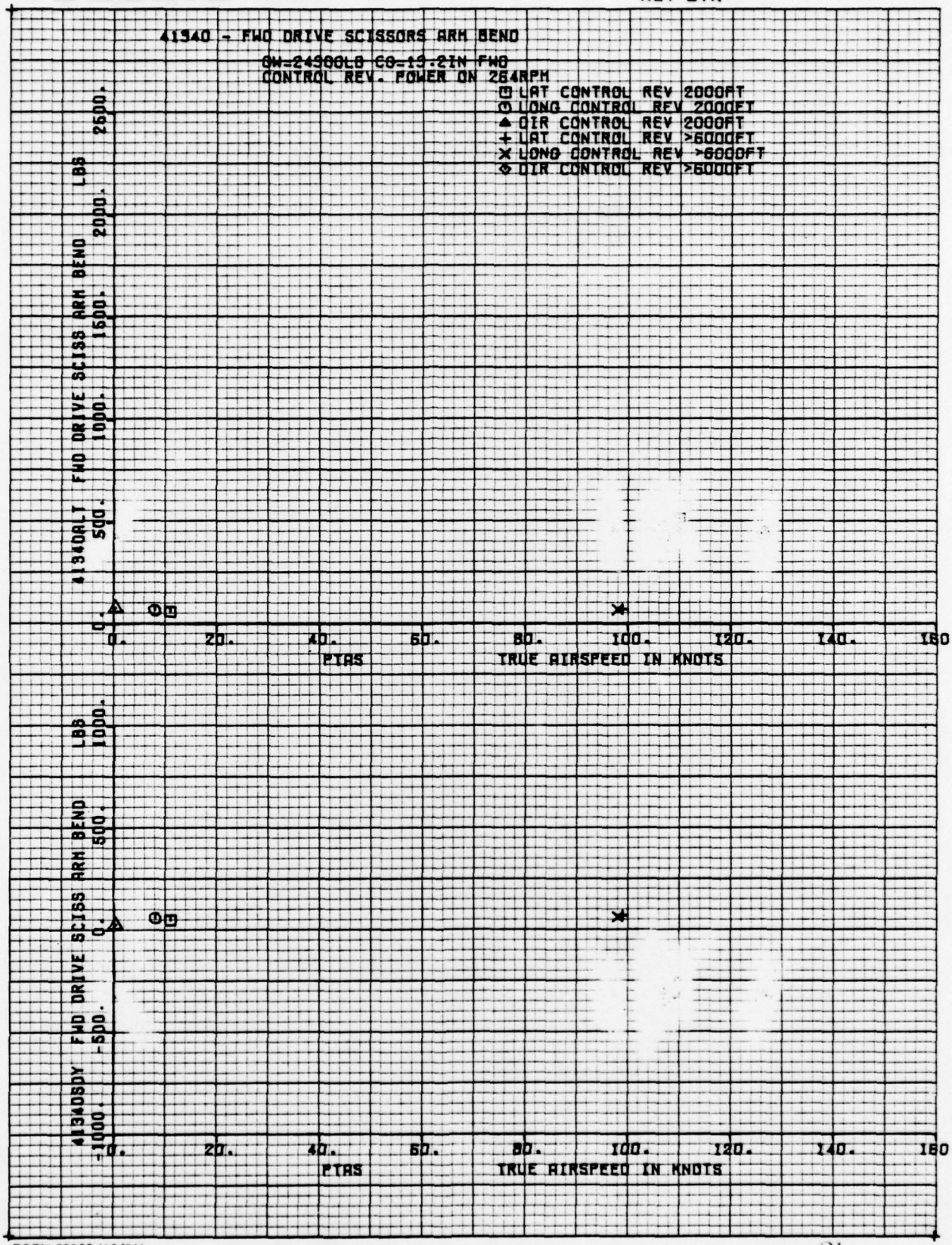

41340 - FWD DRIVE SCISSORS ARM BEND
GW=20800LB CG=8.7IN AFT 264RPM
A/R STEADY 6000FT
A/R STEADY >6000FT
PPD 6000FT
PPD >6000FT
41340RLT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
10.
0. 20. 40. 60. 80. 100. 120. 140. 160.
TAS
TRUE AIRSPEED IN KNOTS

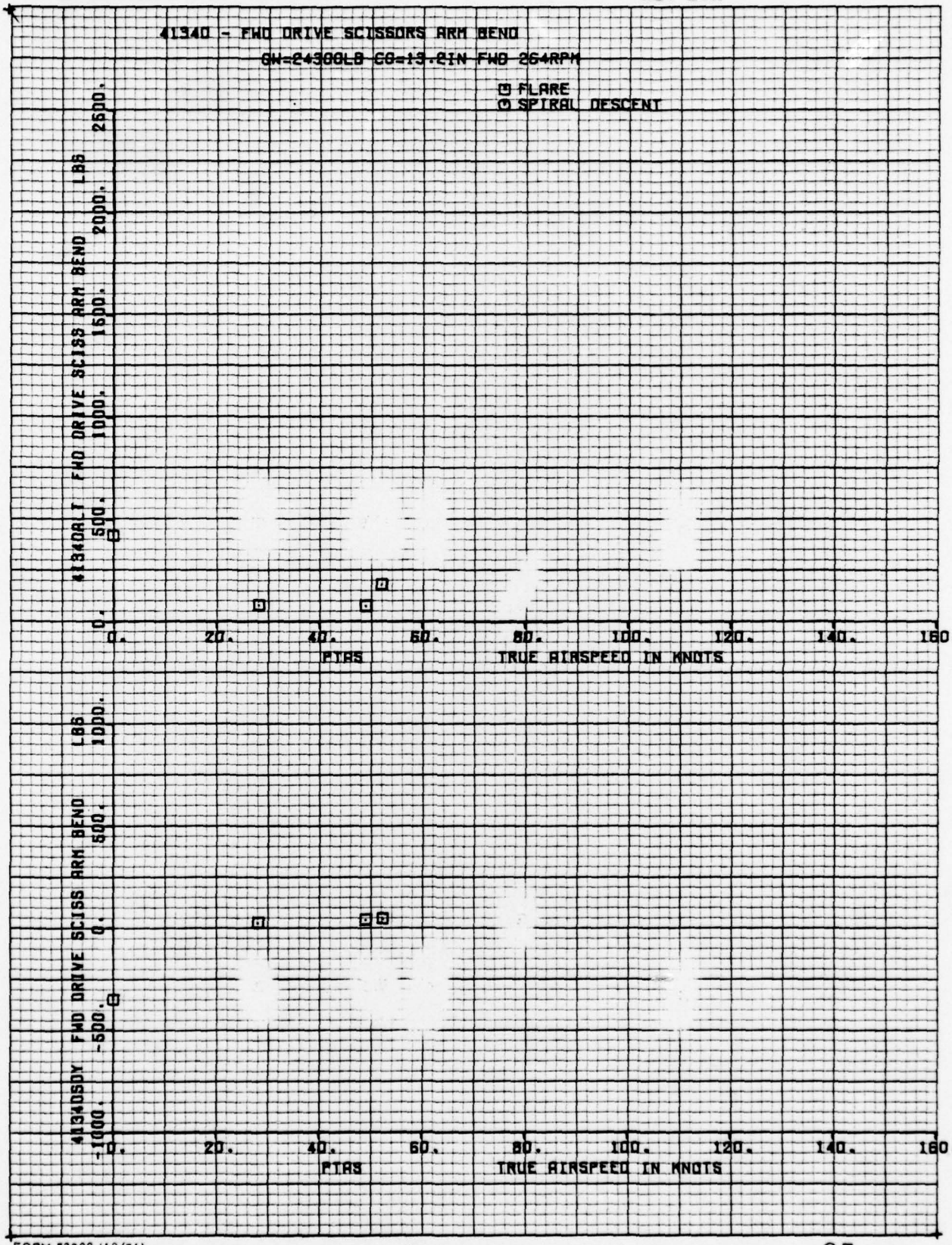

41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=13.2IN FWD
HO=2000FT RPM=264
FLT 117 LEVEL FLT
FLT 119 LEVEL FLT
FLT 121 LEVEL FLT
41340RLT FWD DRIVE SCISS ARM BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

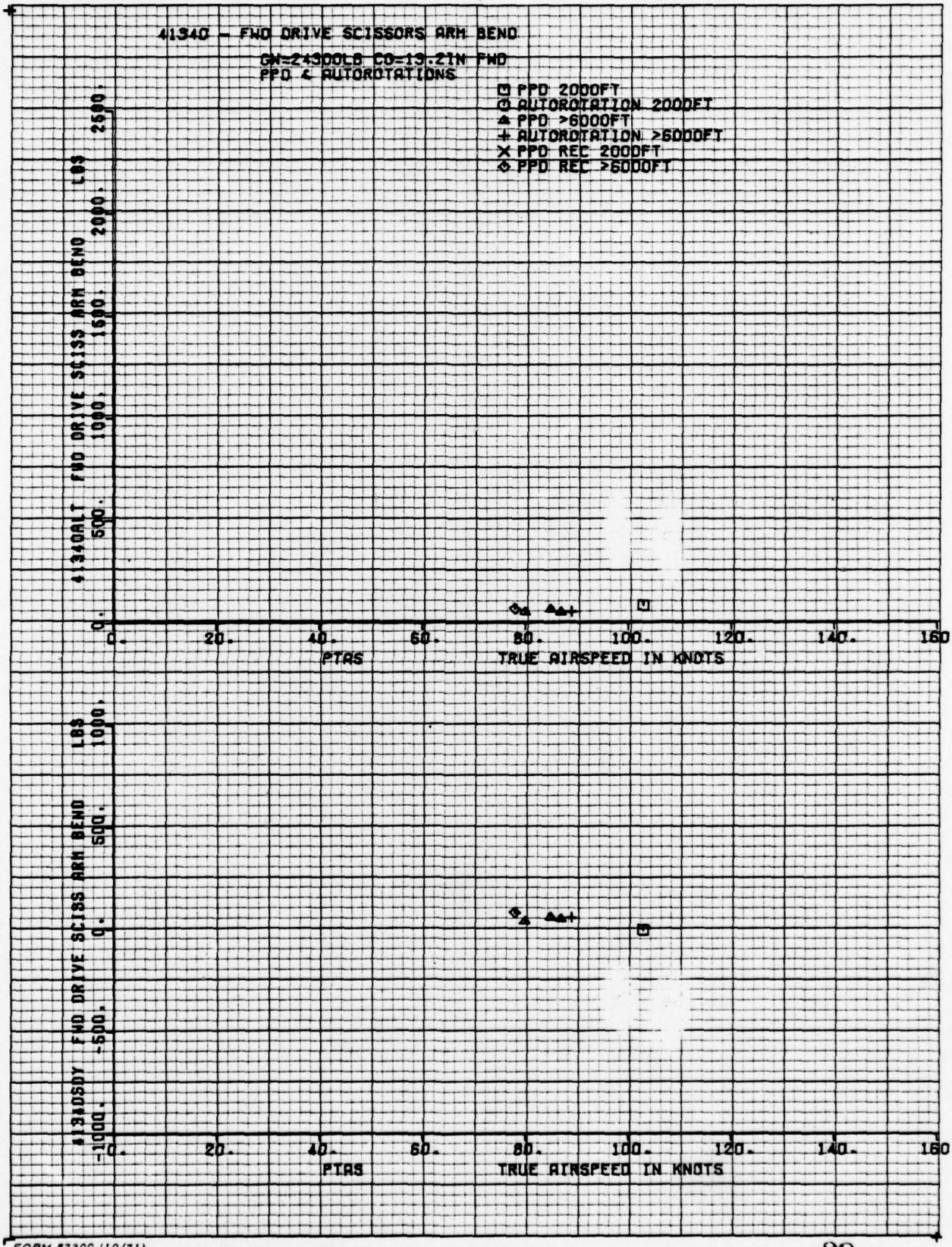

41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=13.2IN FWD
HO=>6000FT RPM=264
FLT 121 LEVEL FLT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
41340BDY FWD DRIVE SCISS ARM BEND LBS
1000.
600.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

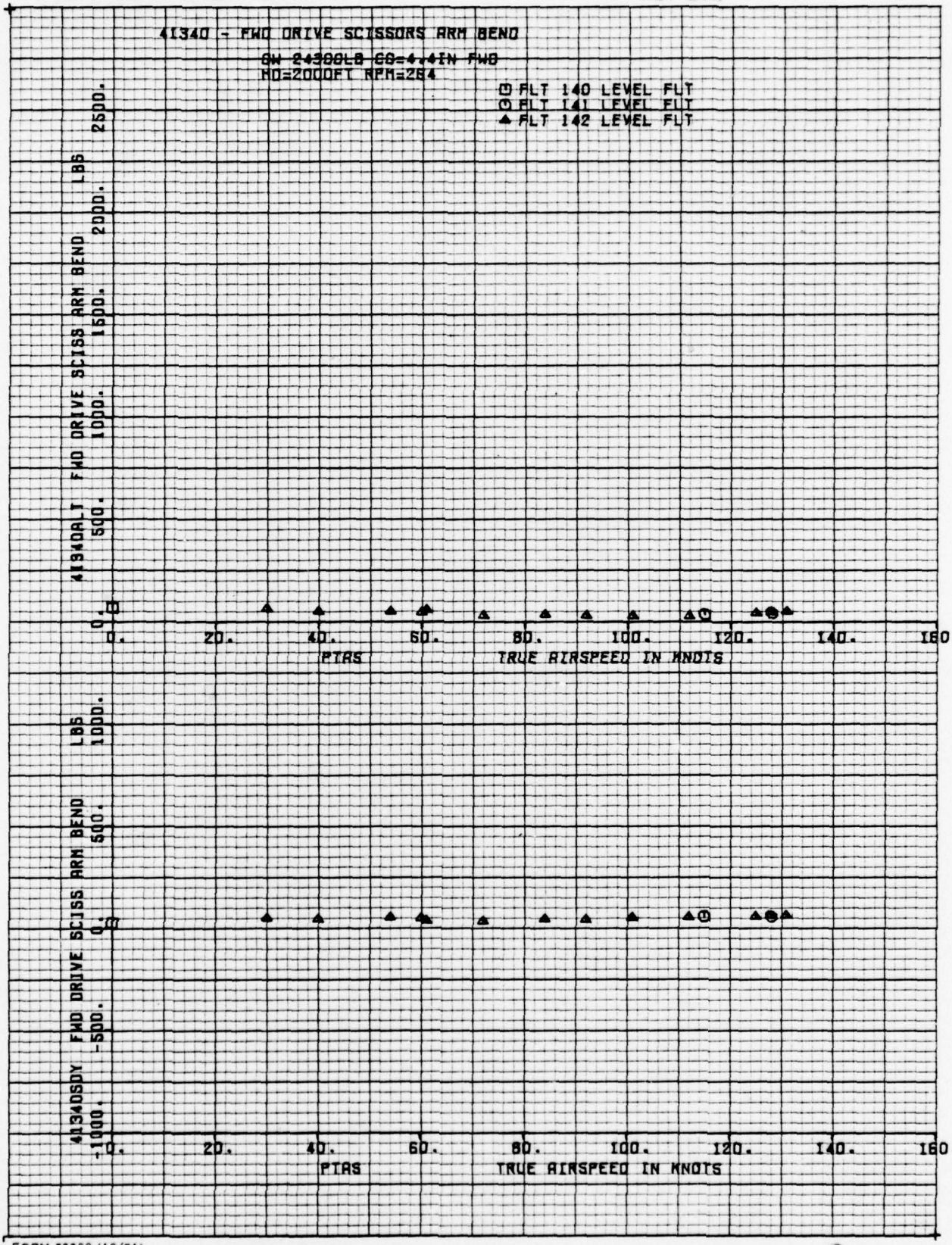

41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=13.21N FWD
POWER ON & OFF PULLUPS
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
CP PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
50.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41340DDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
50.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

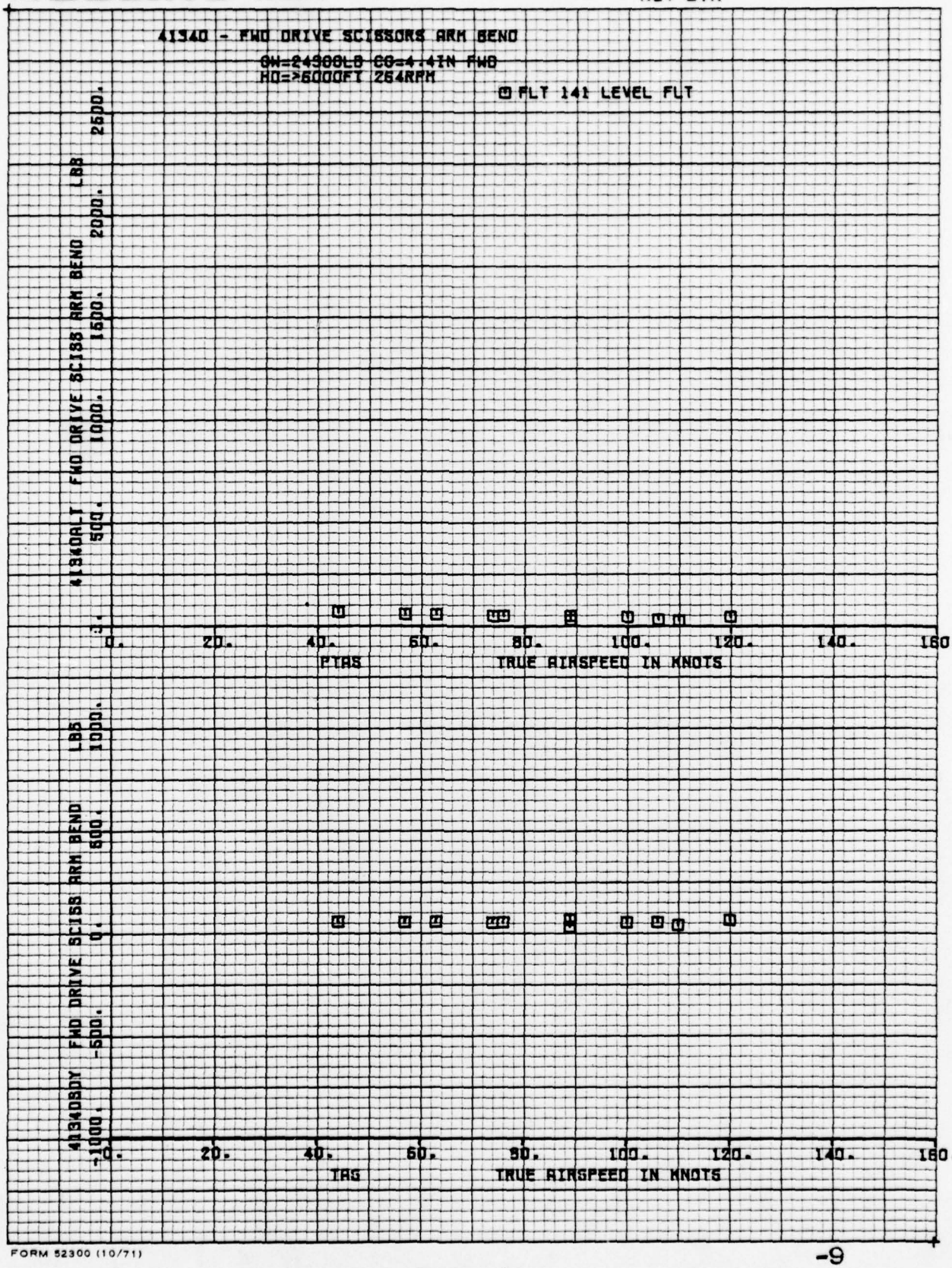

41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=13.2IN FWD
TURNS POWER ON 40FF 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
LT TURN PWR OFF >6000FT
RT TURN PWR OFF >6000FT
41340ALY FWD DRIVE SCISS ARM BEND LBB
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBB
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

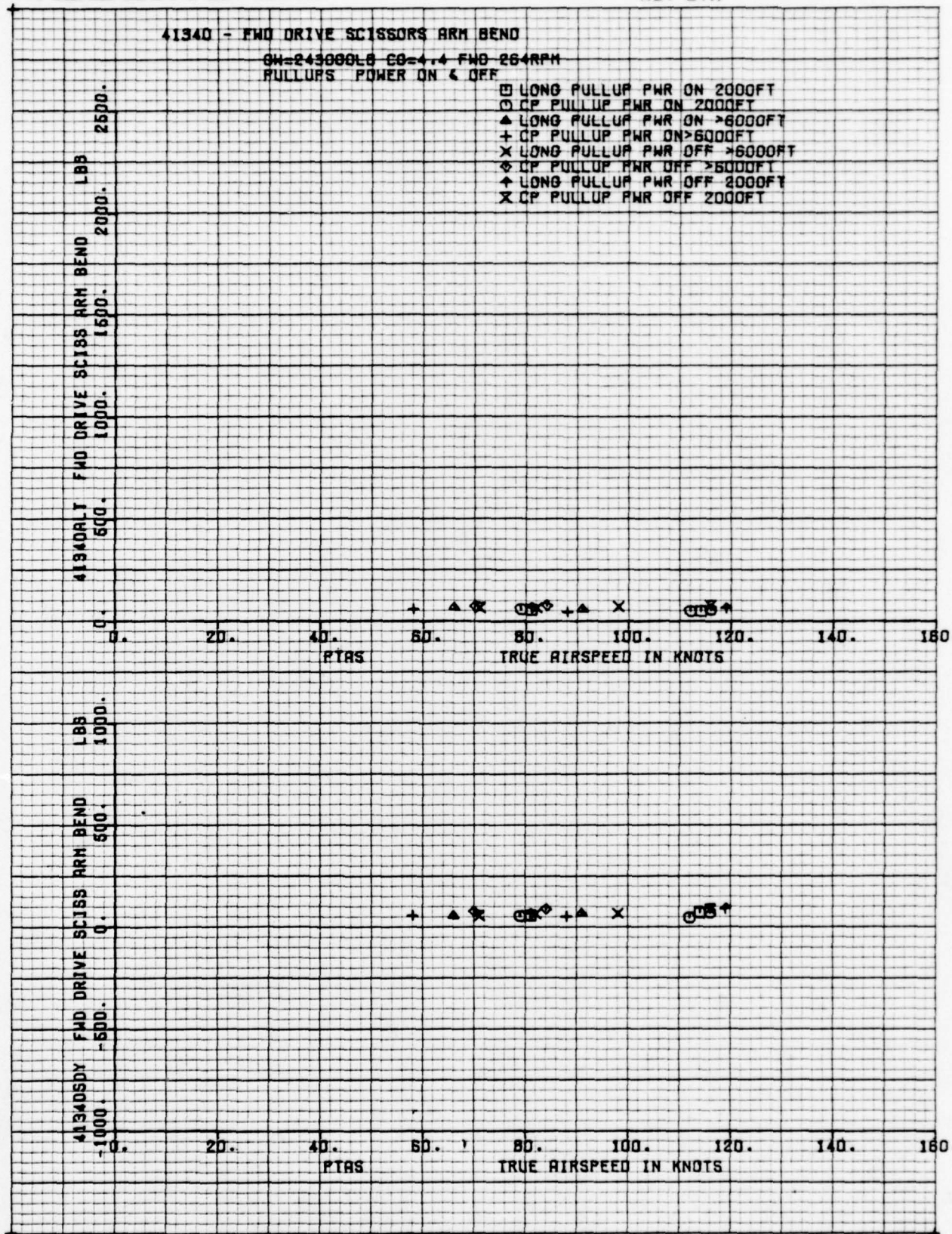

41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=19.2IN FWD
CONTROL REV. POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41340DDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

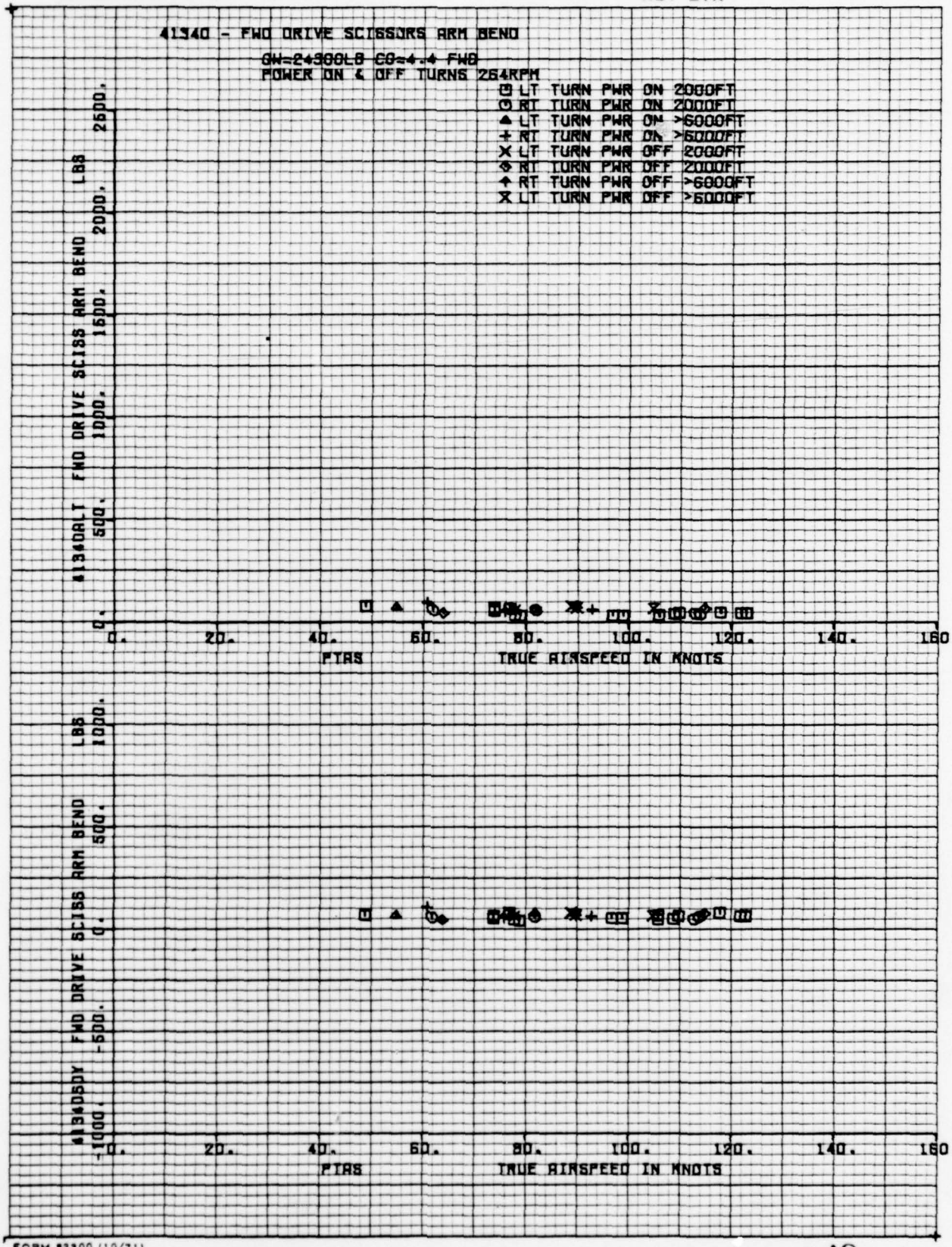

41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=13.2IN FWD 264RPM
FLARE
SPIRAL DESCENT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

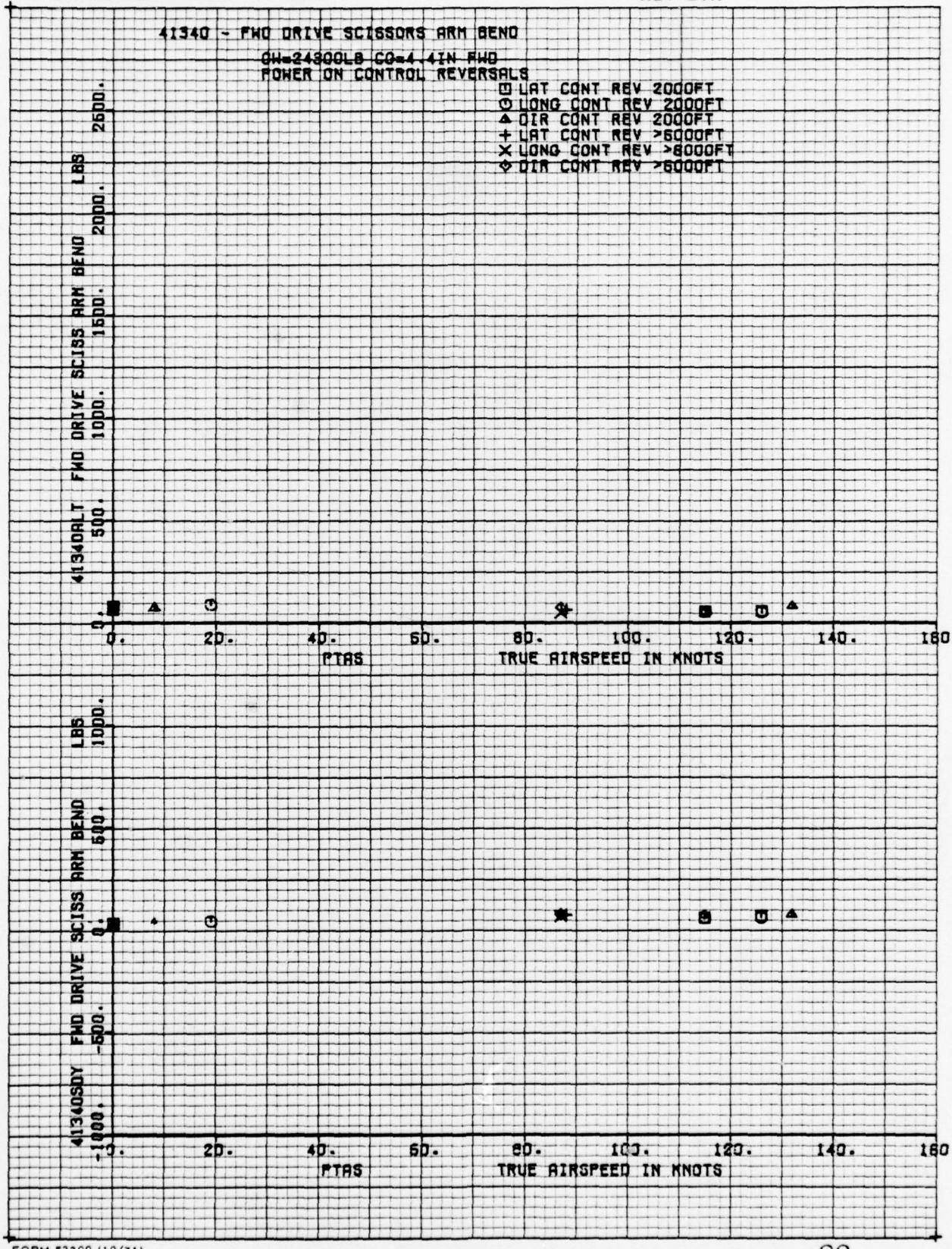

41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=19.2IN FWD
PPD & AUTOROTATIONS
PPD 2000FT
AUTOROTATION 2000FT
PPD >6000FT
AUTOROTATION >6000FT
PPD REC 2000FT
PPD REC >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41340DY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

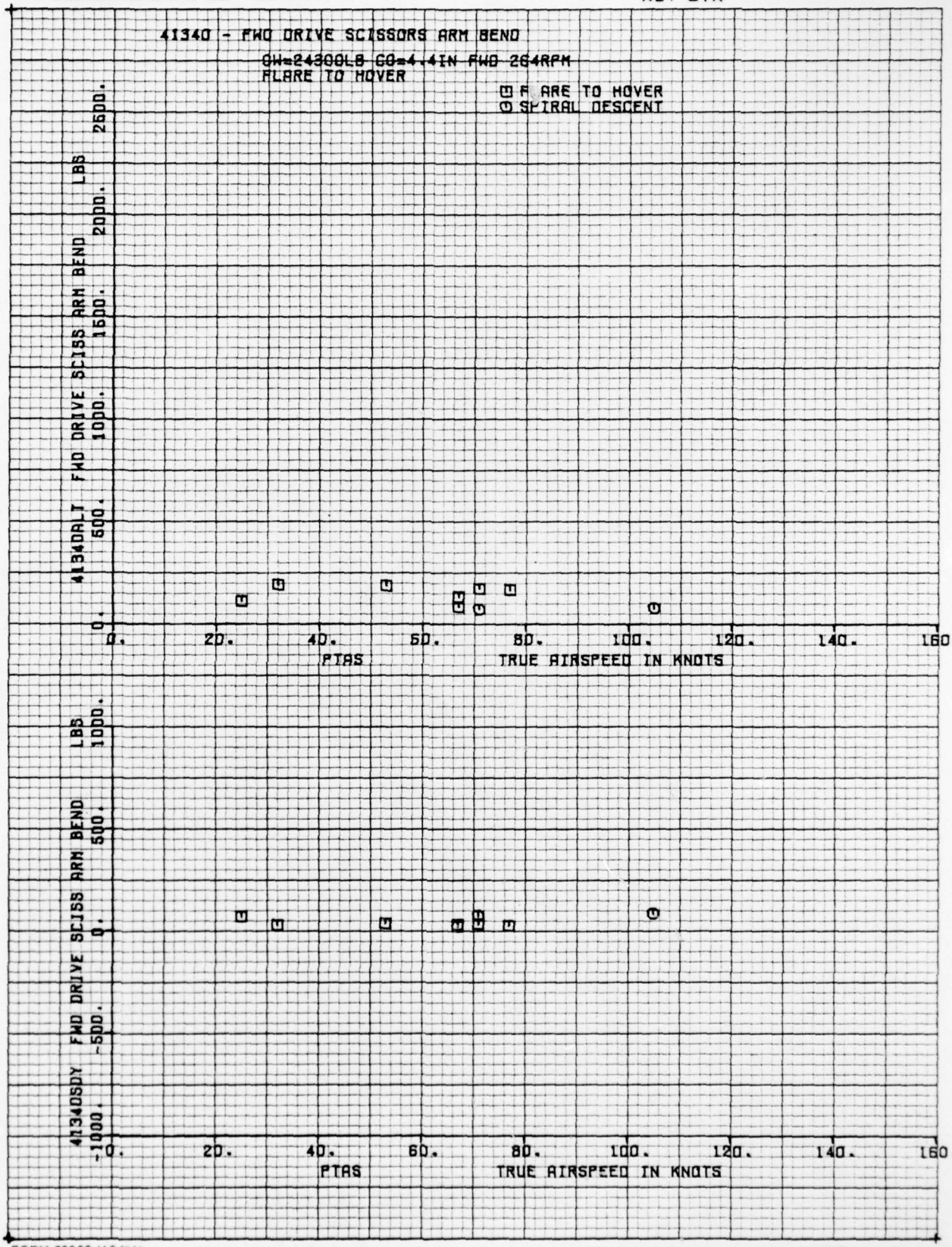

41340 - FWD DRIVE SCISSORS ARM BEND
GW 24300LB CG=4.4IN FWD
HO=2000FT RPM=264
FLT 140 LEVEL FLT
FLT 141 LEVEL FLT
FLT 142 LEVEL FLT
41340ALI FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=4.4IN FWD
AO=>6000FT 264RPM
FLT 141 LEVEL FLT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41340DDY FWD DRIVE SCISS ARM BEND LBS
1000.
600.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
IAS
TRUE AIRSPEED IN KNOTS

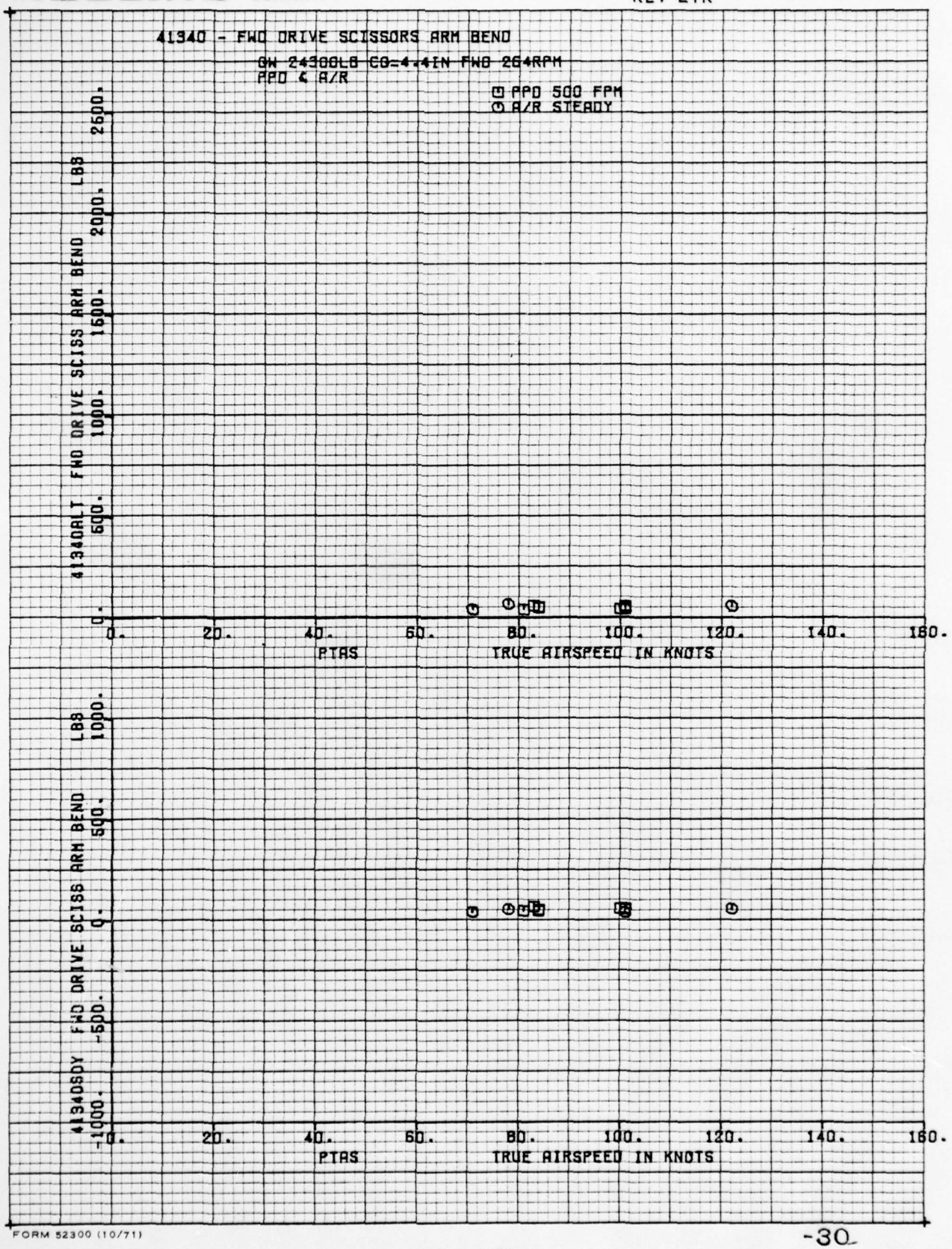

41340 - FWD DRIVE SCISSORS ARM BEND
GW=245000LB CG=4.4 FWD 264RPM
PULLUPS POWER ON & OFF
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON>6000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
LONG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=4.4 FWD
POWER ON & OFF TURNS 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
LT TURN PWR ON >6000FT
RT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
41340DDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

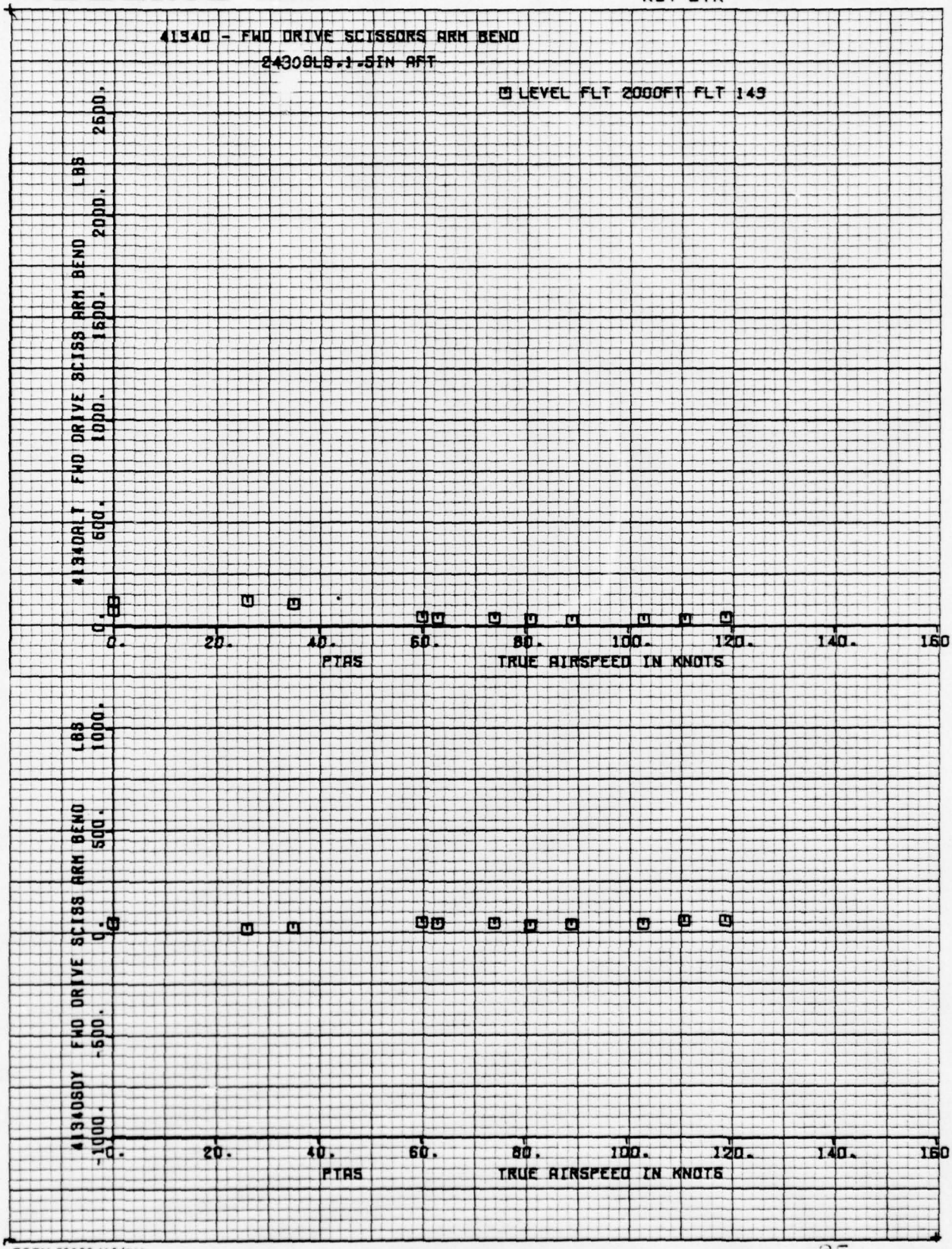

41340 - FWD DRIVE SCISSORS ARM BEND
GW=243000LB CG=4.4IN FWD
POWER ON CONTROL REVERSALS
LAT CONT REV 2000FT
LONG CONT REV 2000FT
DIR CONT REV 2000FT
LAT CONT REV >6000FT
LONG CONT REV >6000FT
DIR CONT REV >6000FT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


41340 - FWD DRIVE SCISSORS ARM BEND
GW=24300LB CG=4.4IN FWD 264RPM
FLARE TO HOVER
A ARE TO HOVER
SPIRAL DESCENT
41340ALT FWD DRIVE SCISS ARM BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
41340SDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

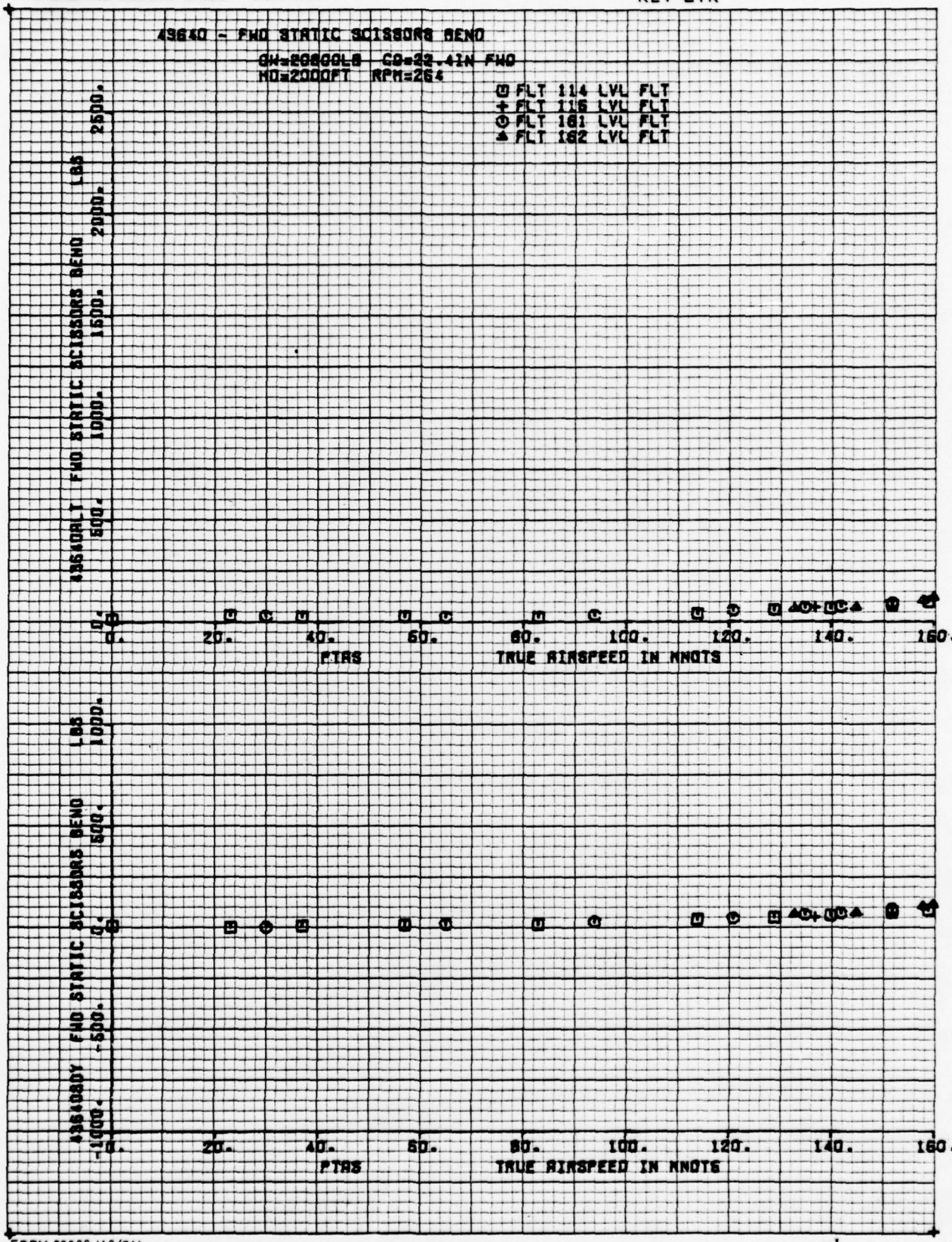


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41340 - FWD DRIVE SCISSORS ARM BEND
243088LB.1.SIN AFT
LEVEL FLT 2000FT FLT 149
41340ALT FWD DRIVE SCISS ARM BEND LBS
2600.
2000.
1600.
1000.
600.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
41340BDY FWD DRIVE SCISS ARM BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

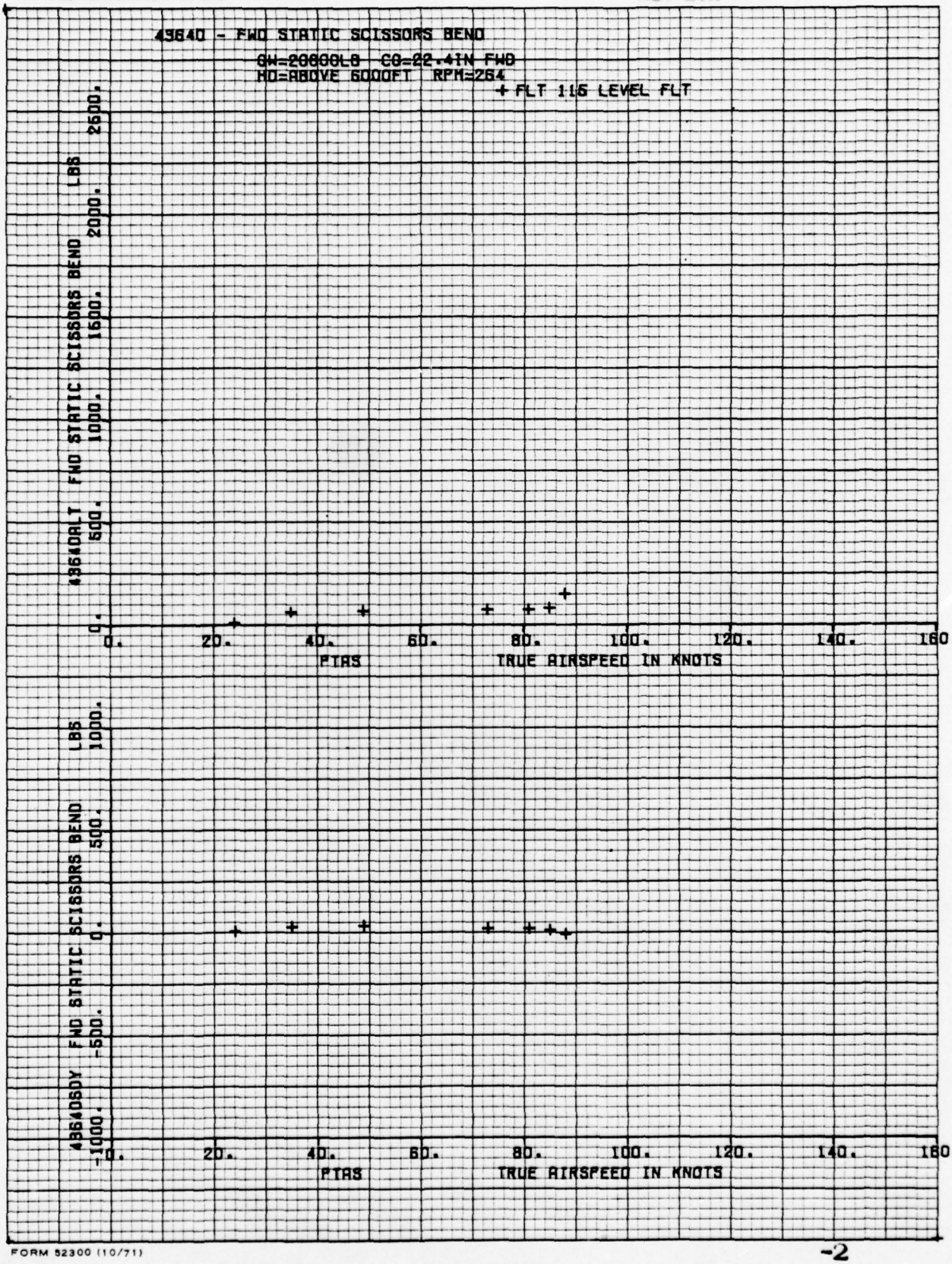
4.5 Forward Static Scissors

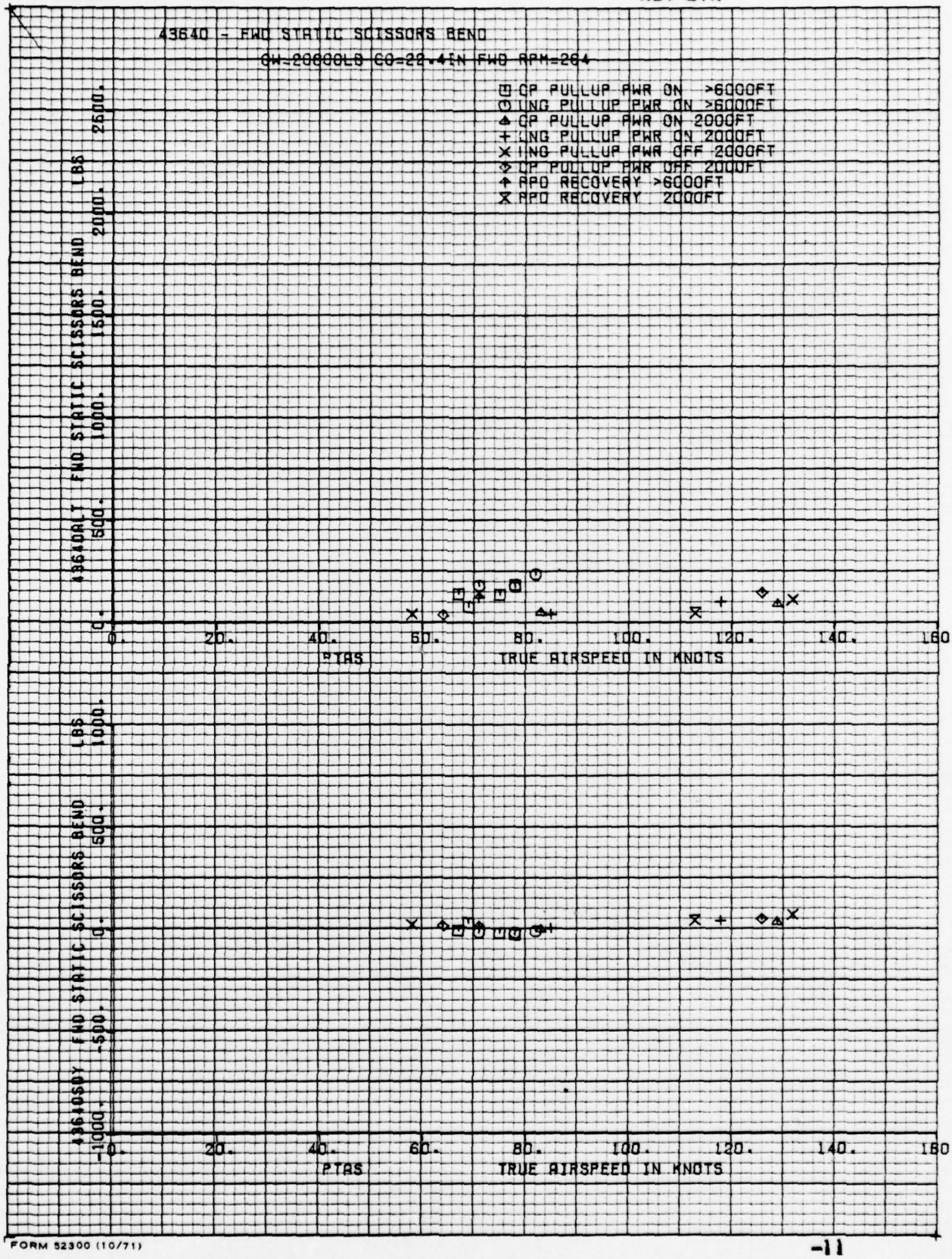
THE BOEING COMPANY

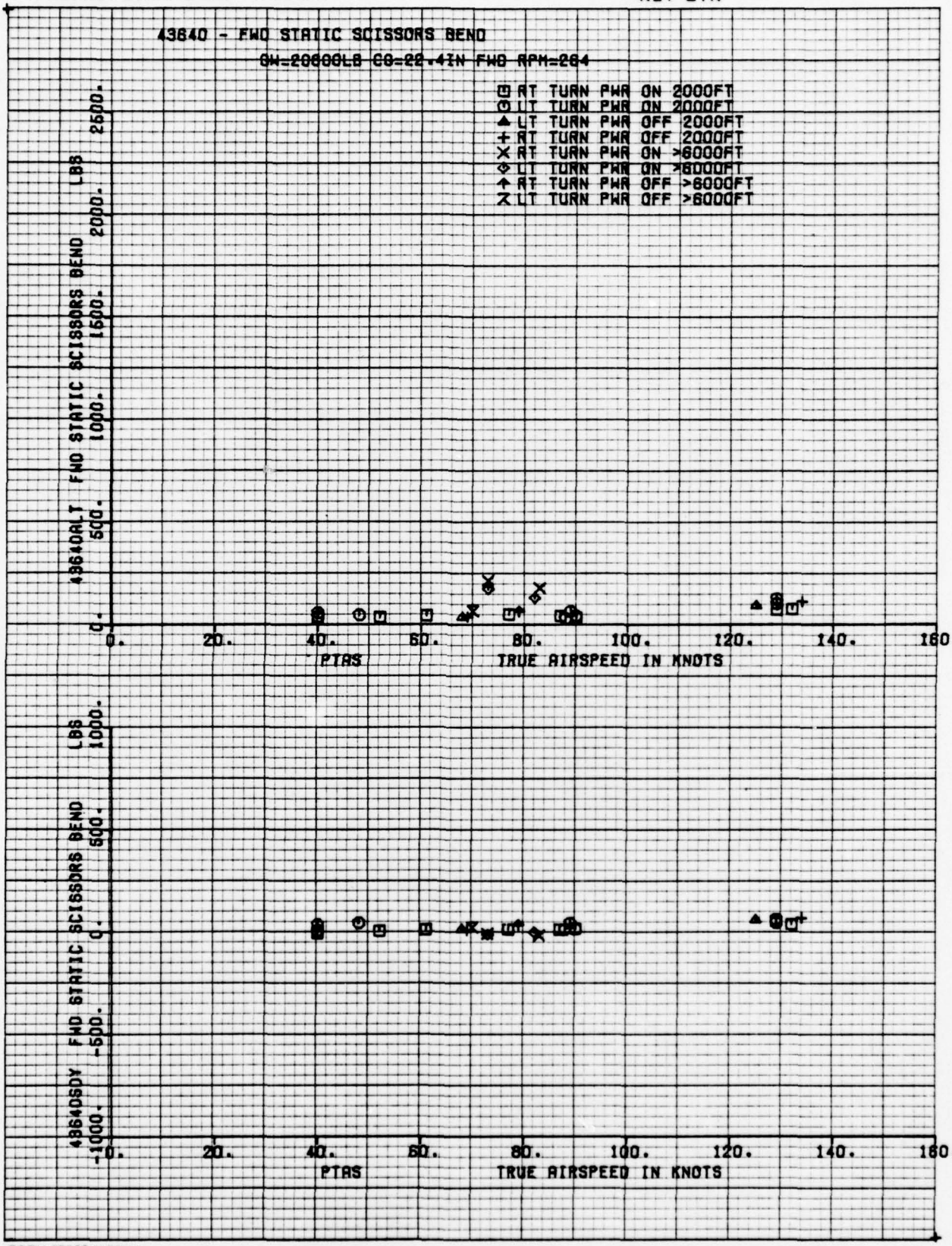


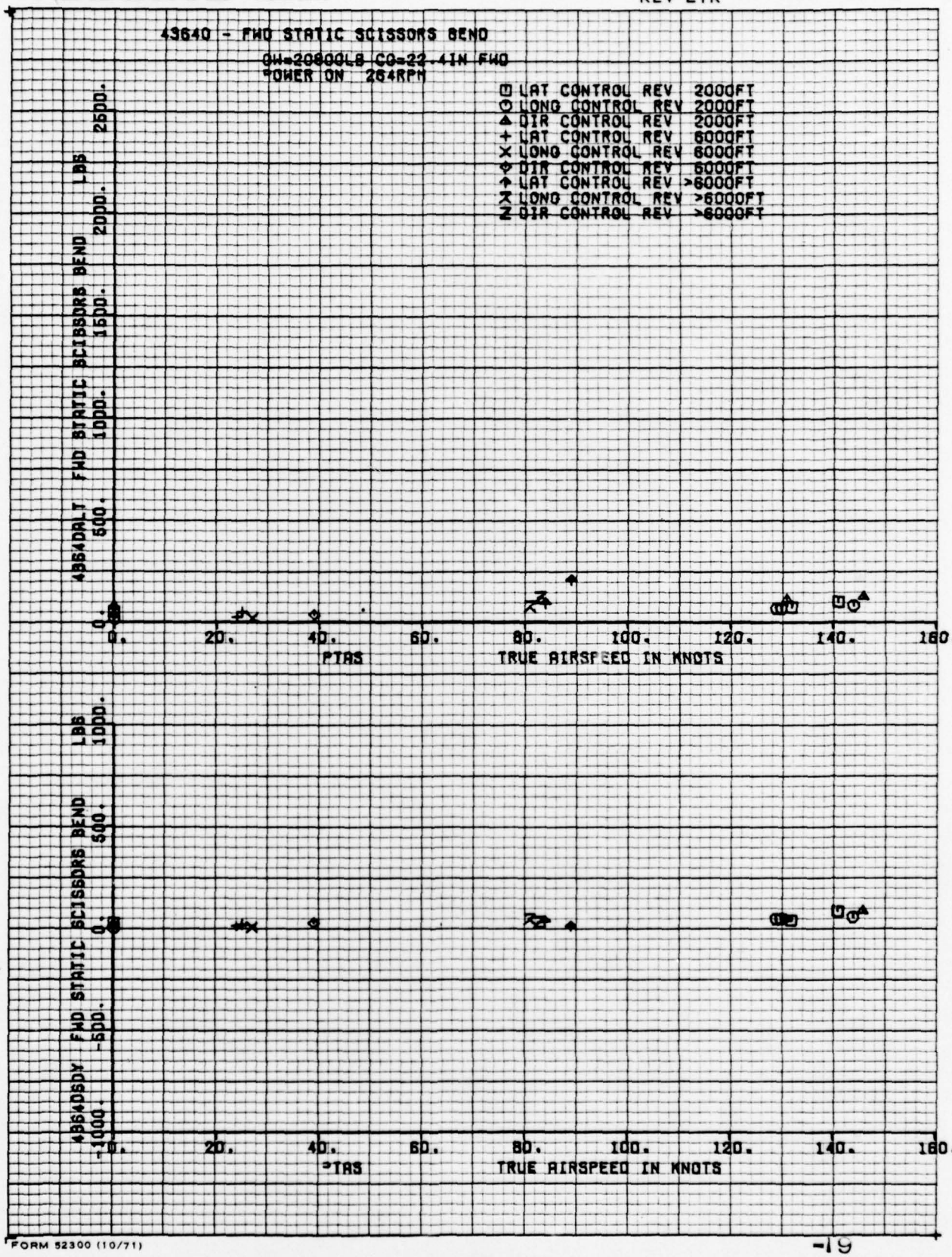
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THE BOEING COMPANY

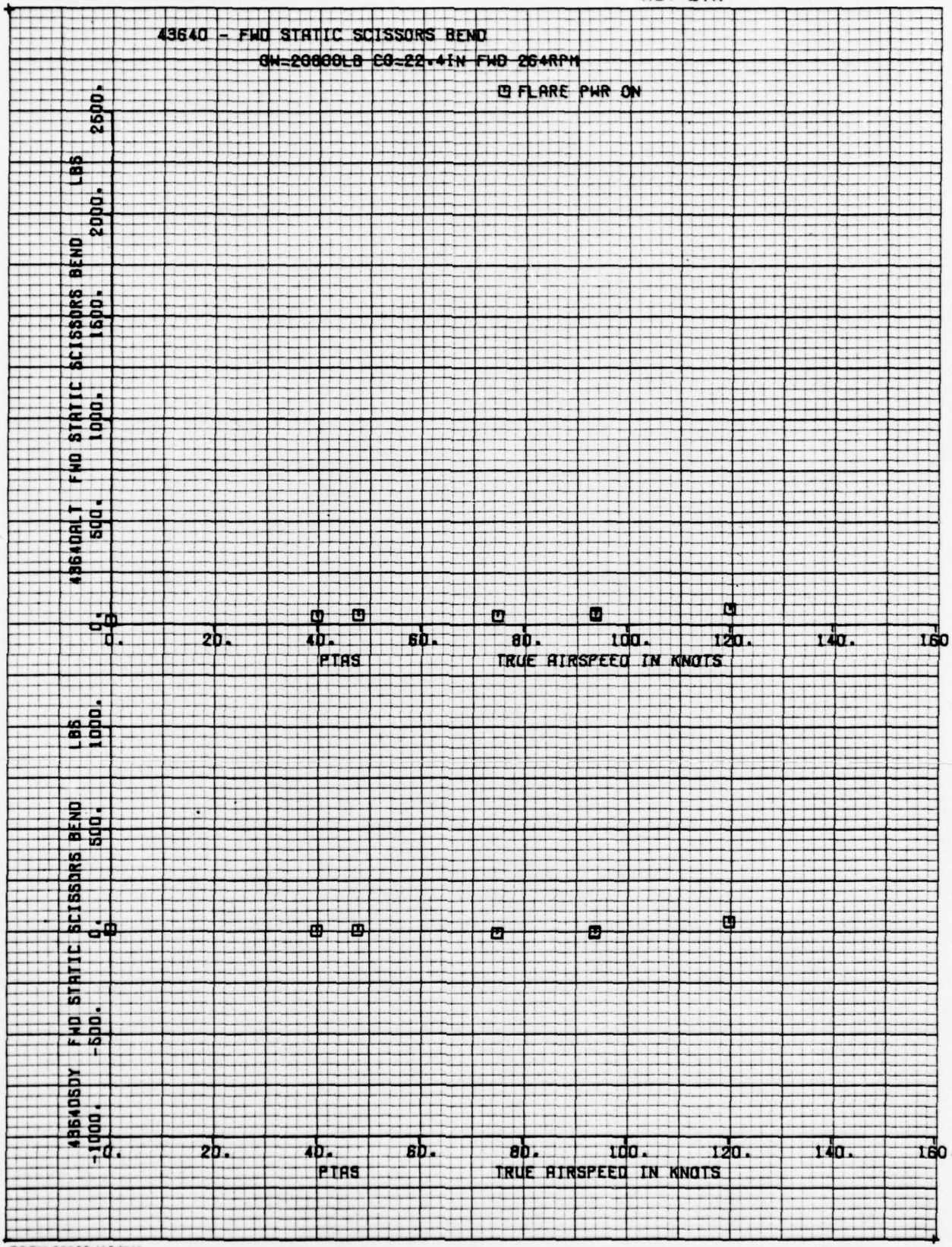


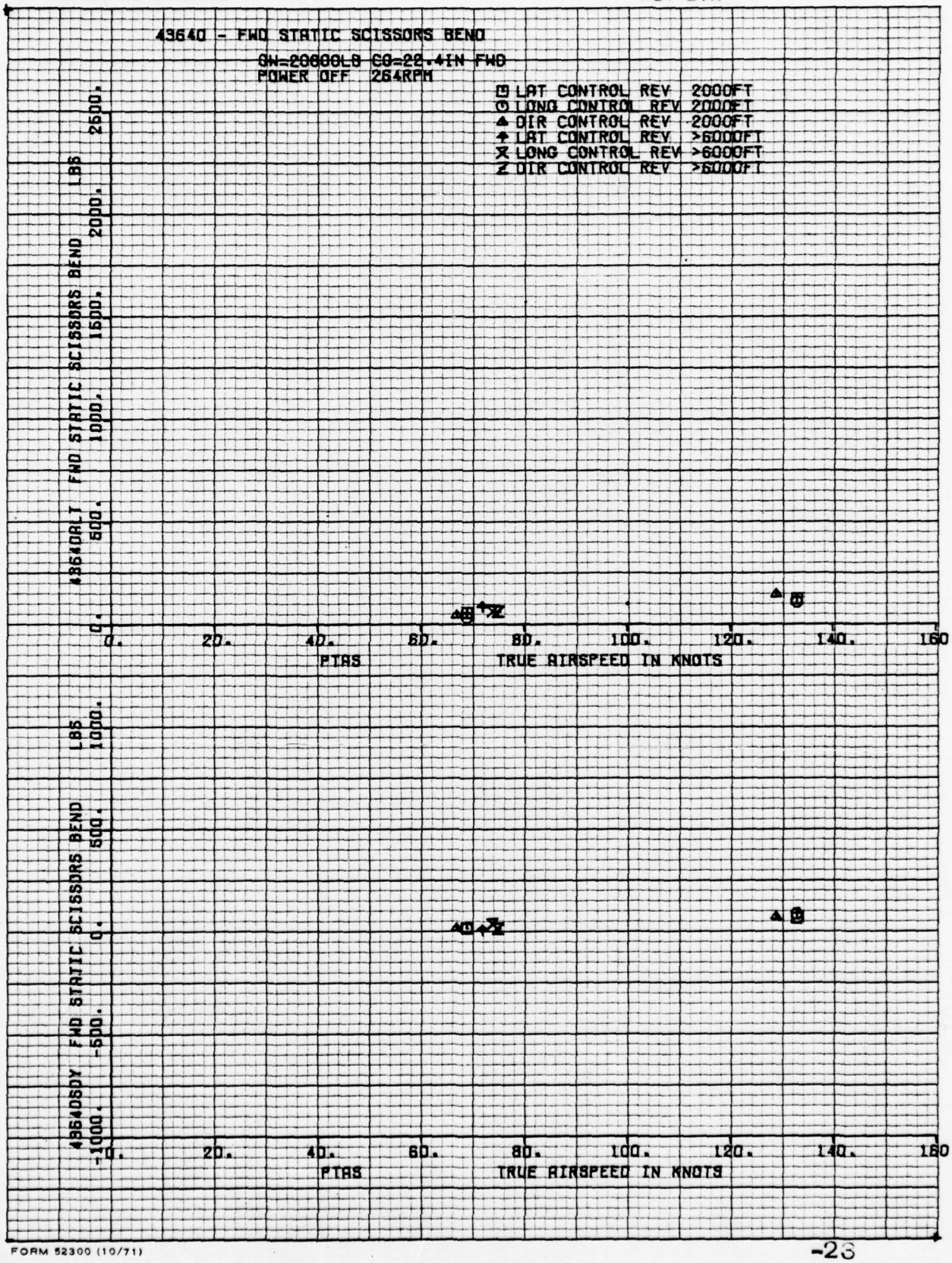

43640 - FWD STATIC SCISSORS BEND
GW=206000LB CG=22.4IN FWD RPM=264
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 2000FT
LNG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
APD RECOVERY >6000FT
APD RECOVERY 2000FT
43640ALT FWD STATIC SCISSORS BEND LBS
0.
500.
1000.
1500.
2000.
2500.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
-1000.
-500.
0.
500.
1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

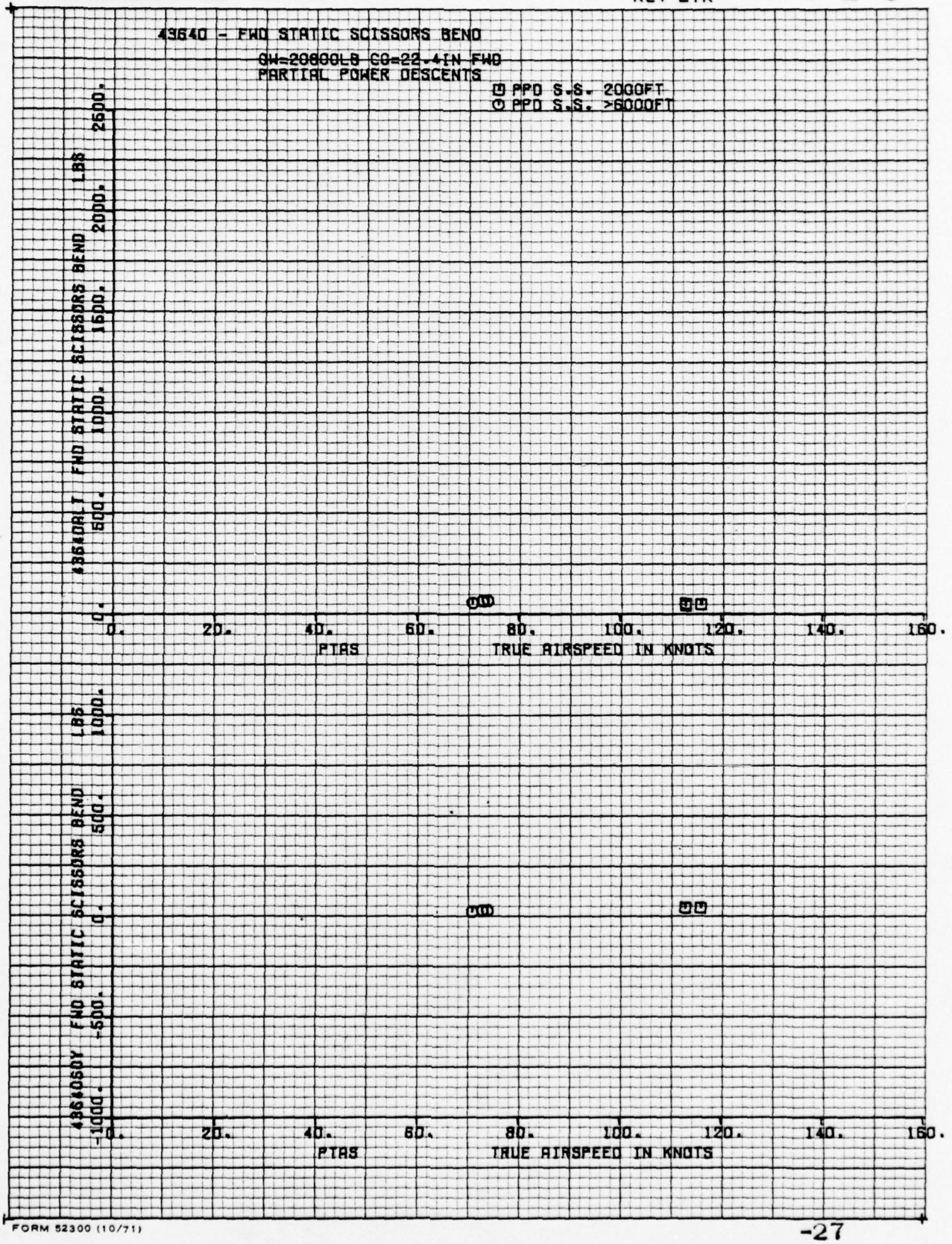

43640 - FWD STATIC SCISSORS BEND
GW=206006LB CG=22.4IN FWD RPM=264
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

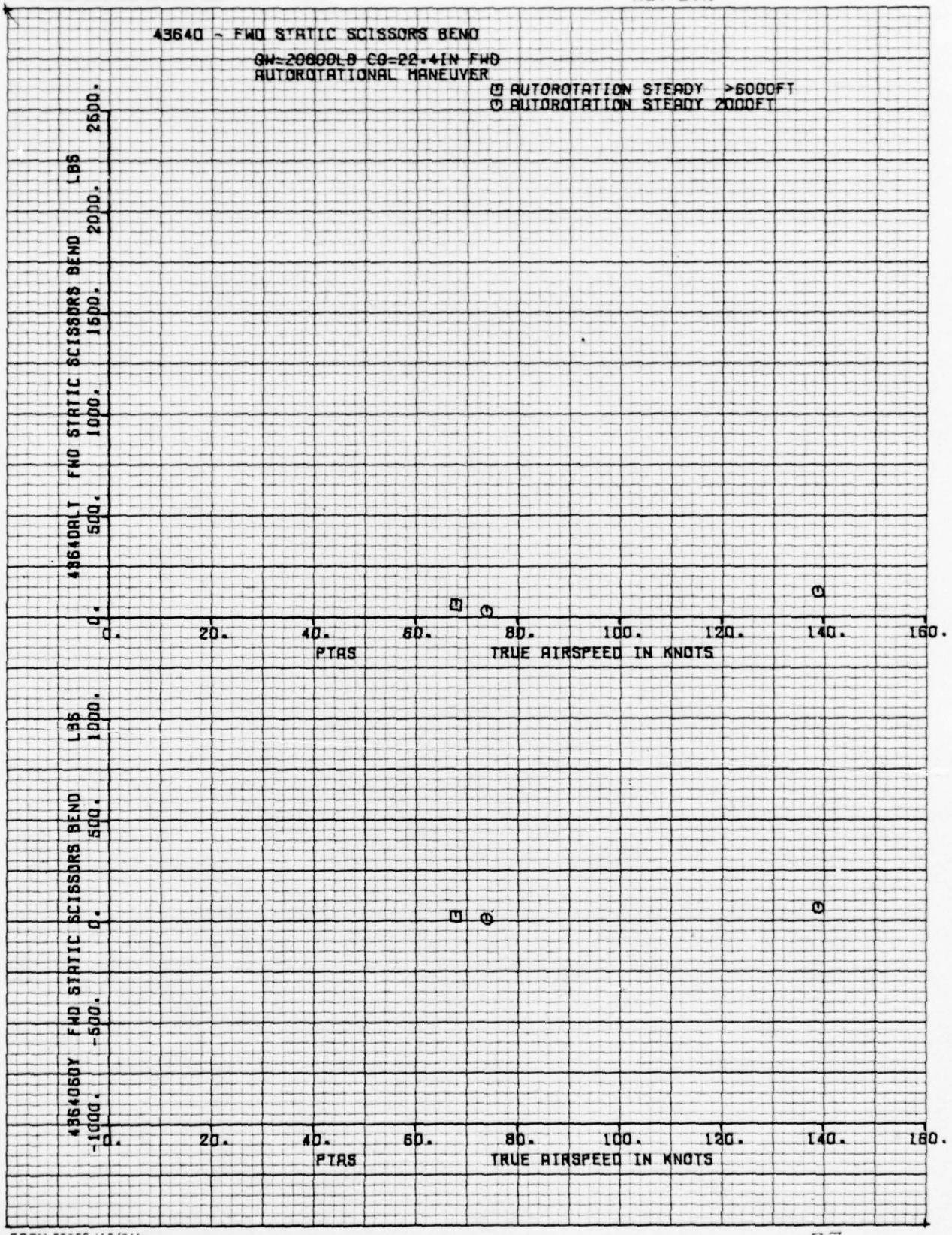


FORM 52300 (10/71)

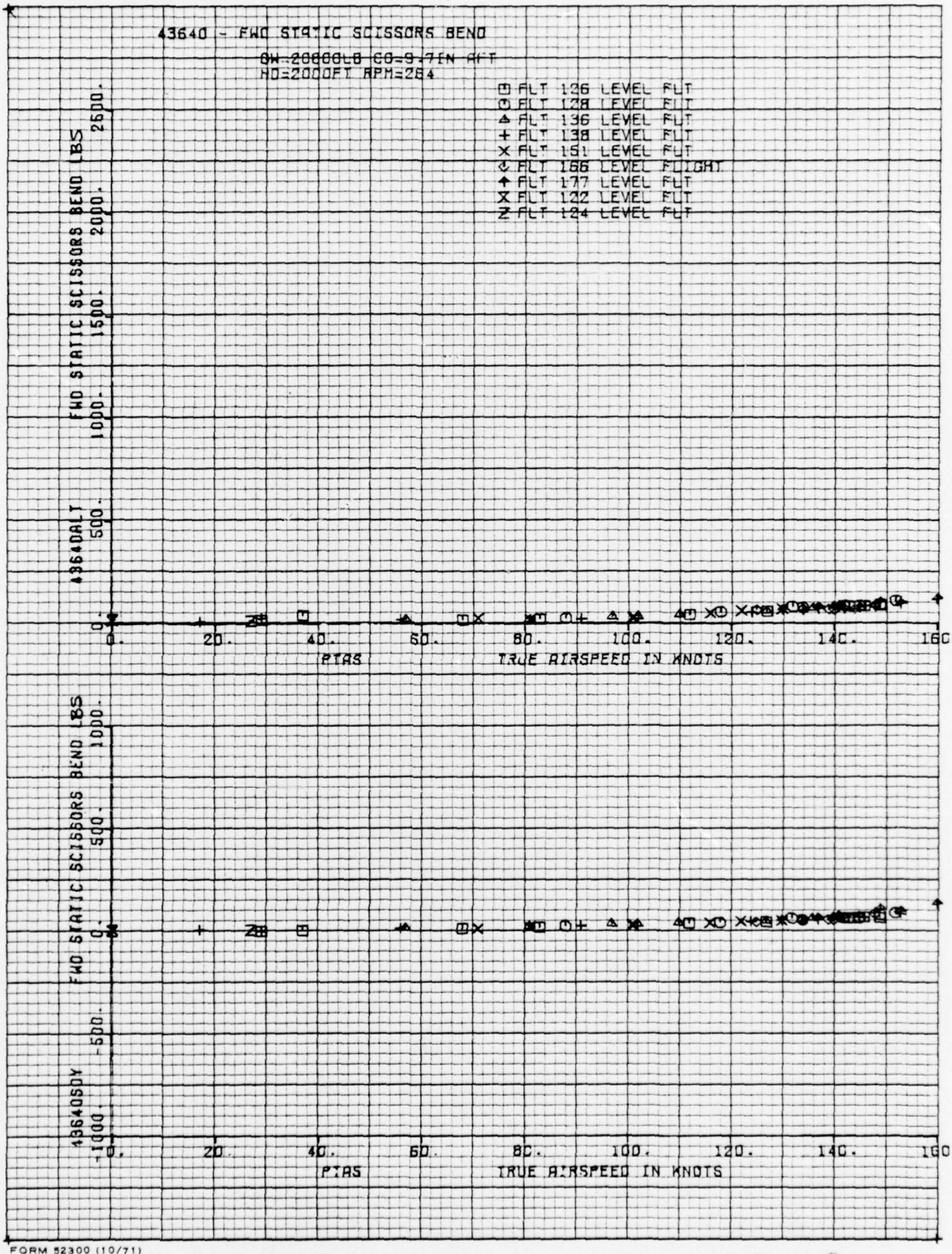

43640 - FWD STATIC SCISSORS BEND
GW=20800LB CG=22.4IN FWD 264RPM
FLARE PWR ON
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43640DDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

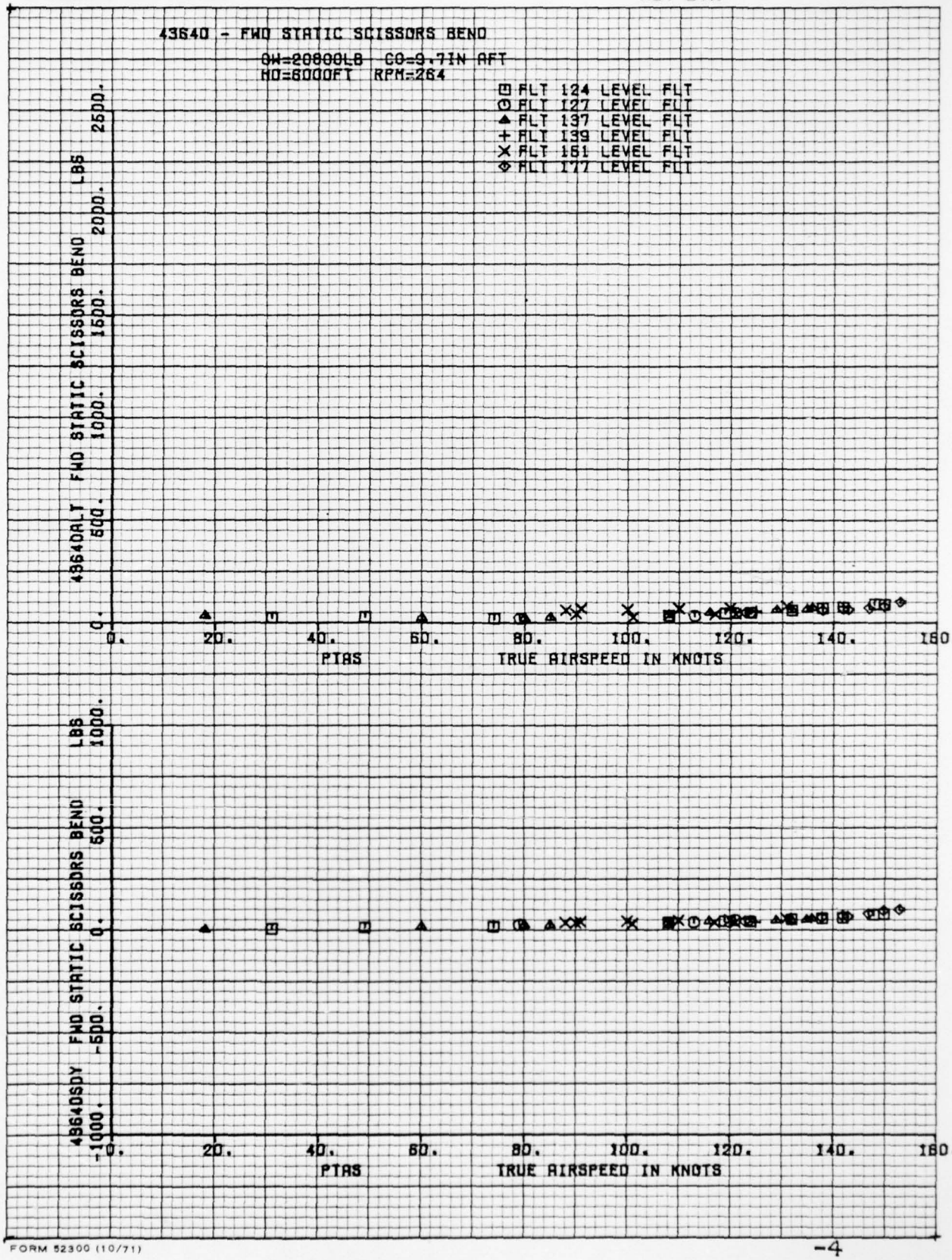

43640 - FWD STATIC SCISSORS BEND
GW=206000LB CG=22.4IN FWD
POWER OFF 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43640RLT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS
43640BDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS


43640 - FWD STATIC SCISSORS BEND
GW=208000LB CG=22.4IN FWD
PARTIAL POWER DESCENTS
PPD S.S. 2000FT
PPD S.S. >6000FT
43640RLT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

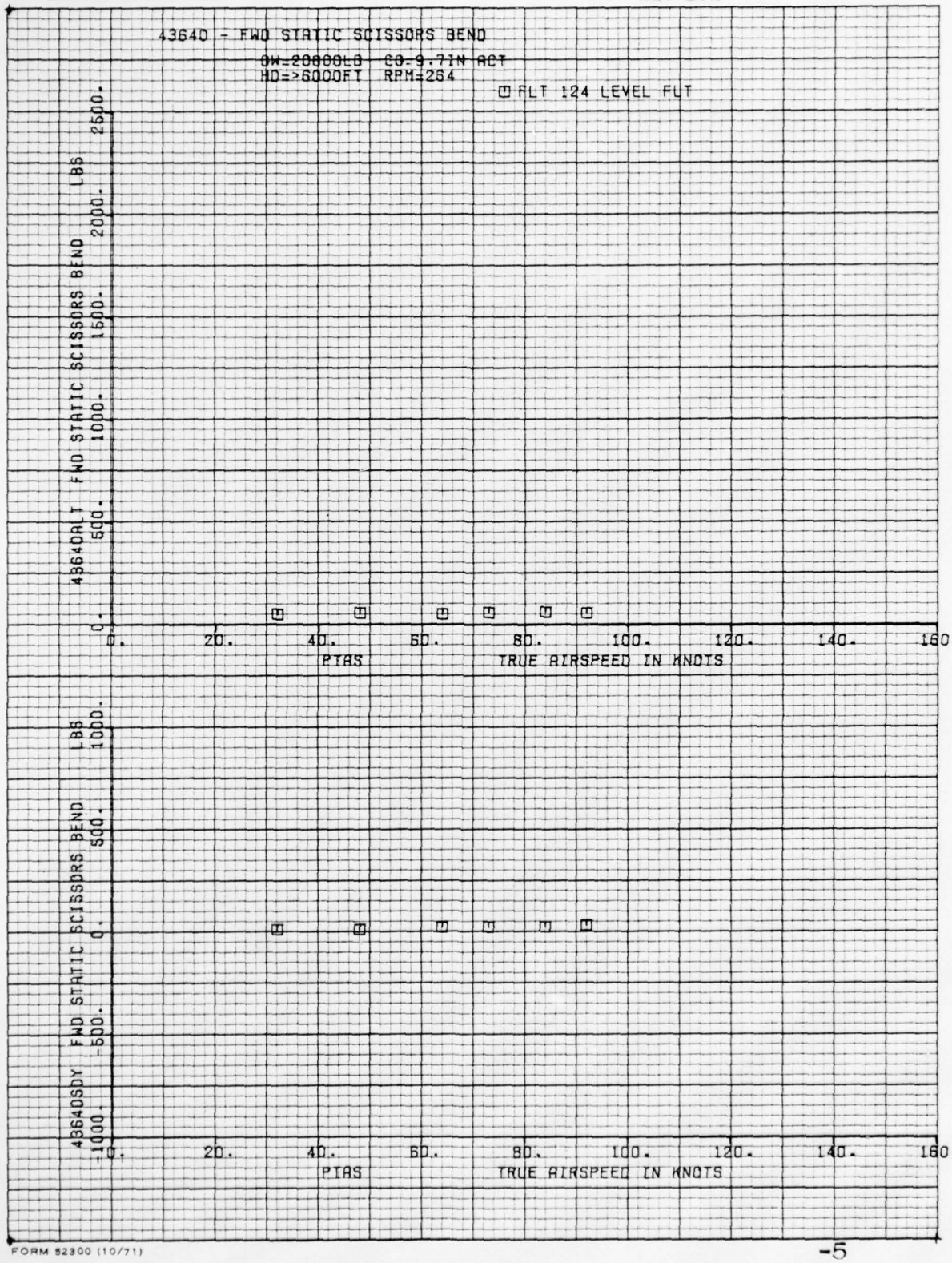

43640 - FWD STATIC SCISSORS BEND
GW=20800LB CG=22.4IN FWD
AUTOROTATIONAL MANEUVER
AUTOROTATION STEADY >6000FT
AUTOROTATION STEADY 2000FT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640BDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY





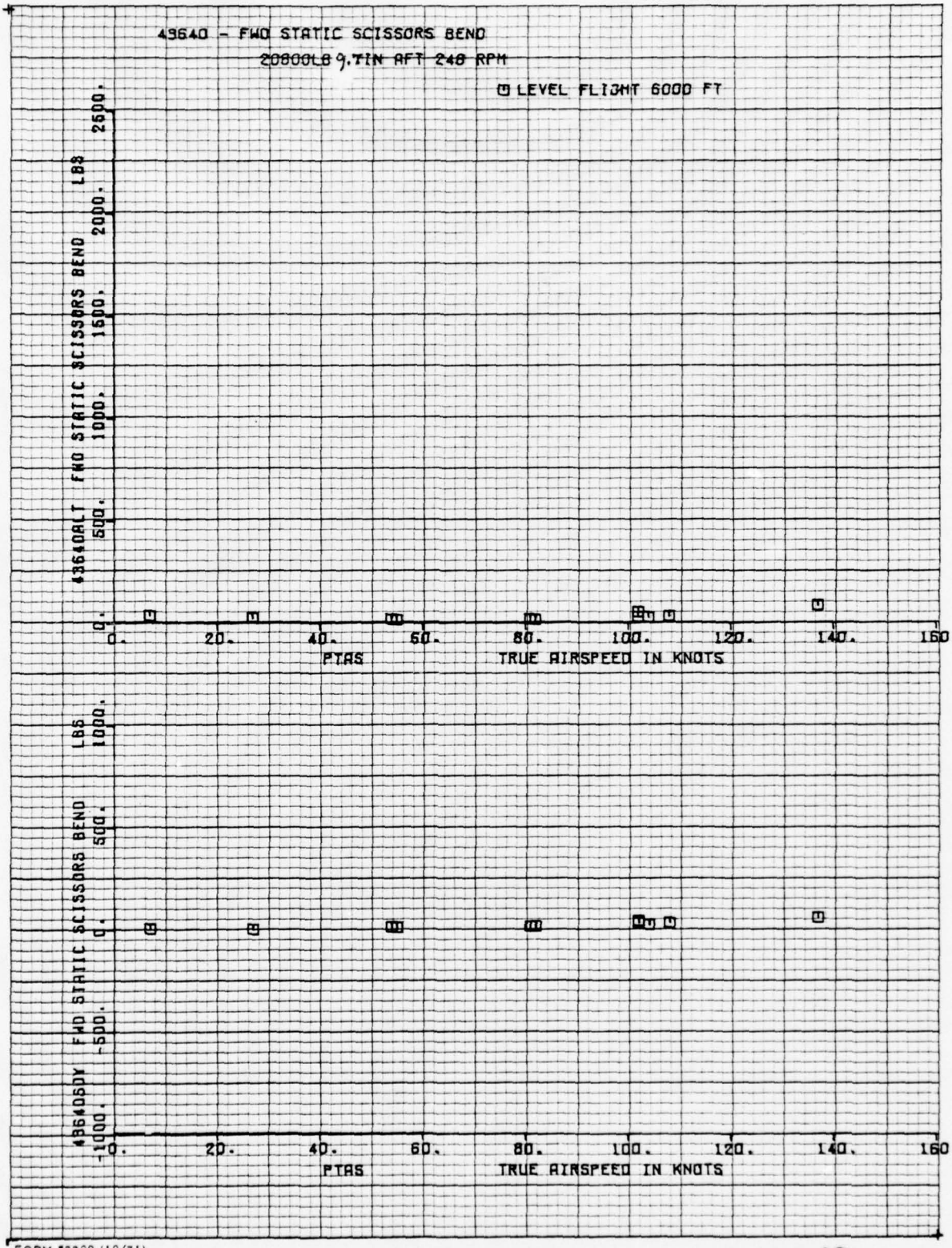
FORM 52300 (10/71)



FORM 52300 (10/71)

THE BOEING COMPANY
NUMBER D210-11168-3
REV LTR VOLUME 6

THE BOEING COMPANY

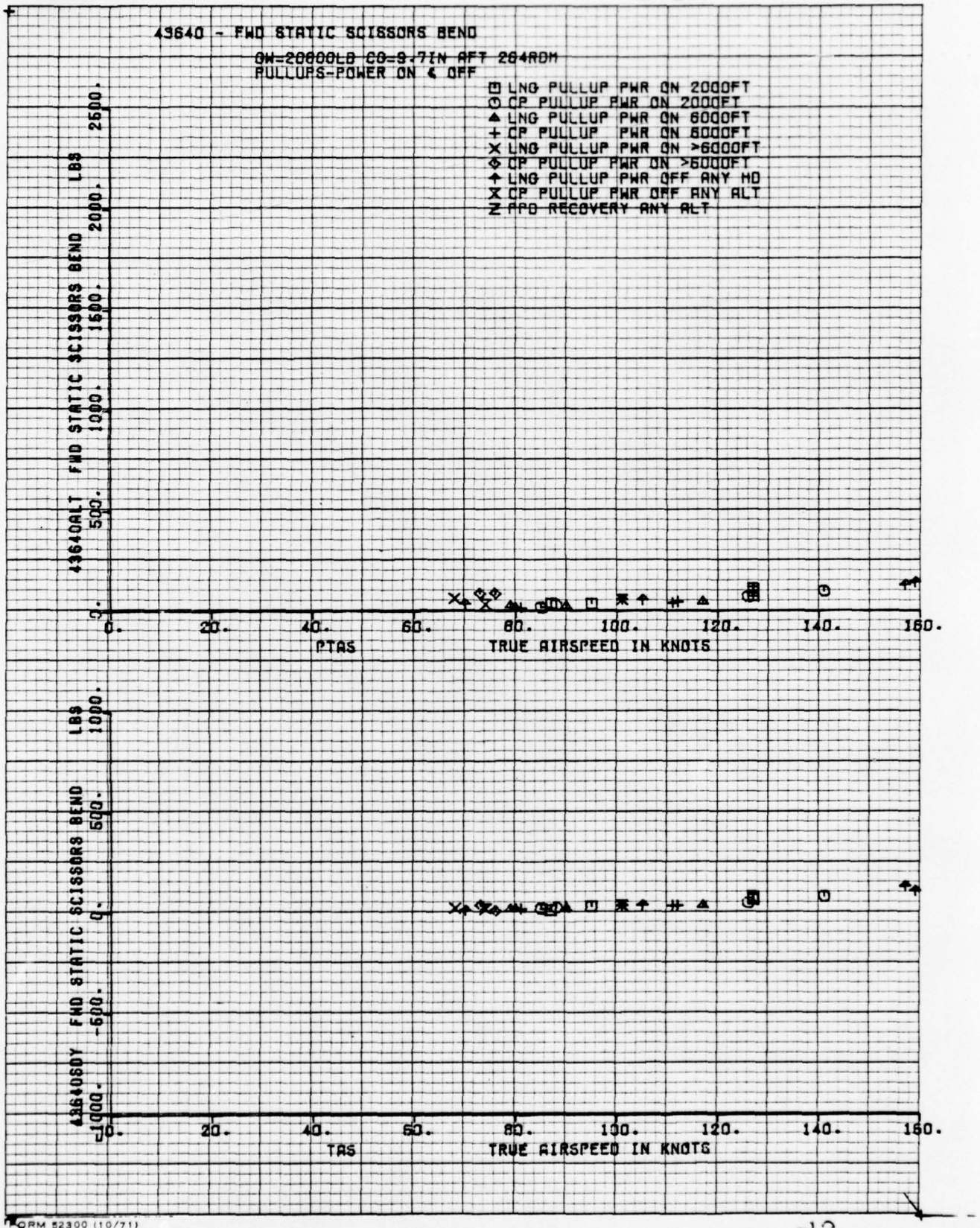


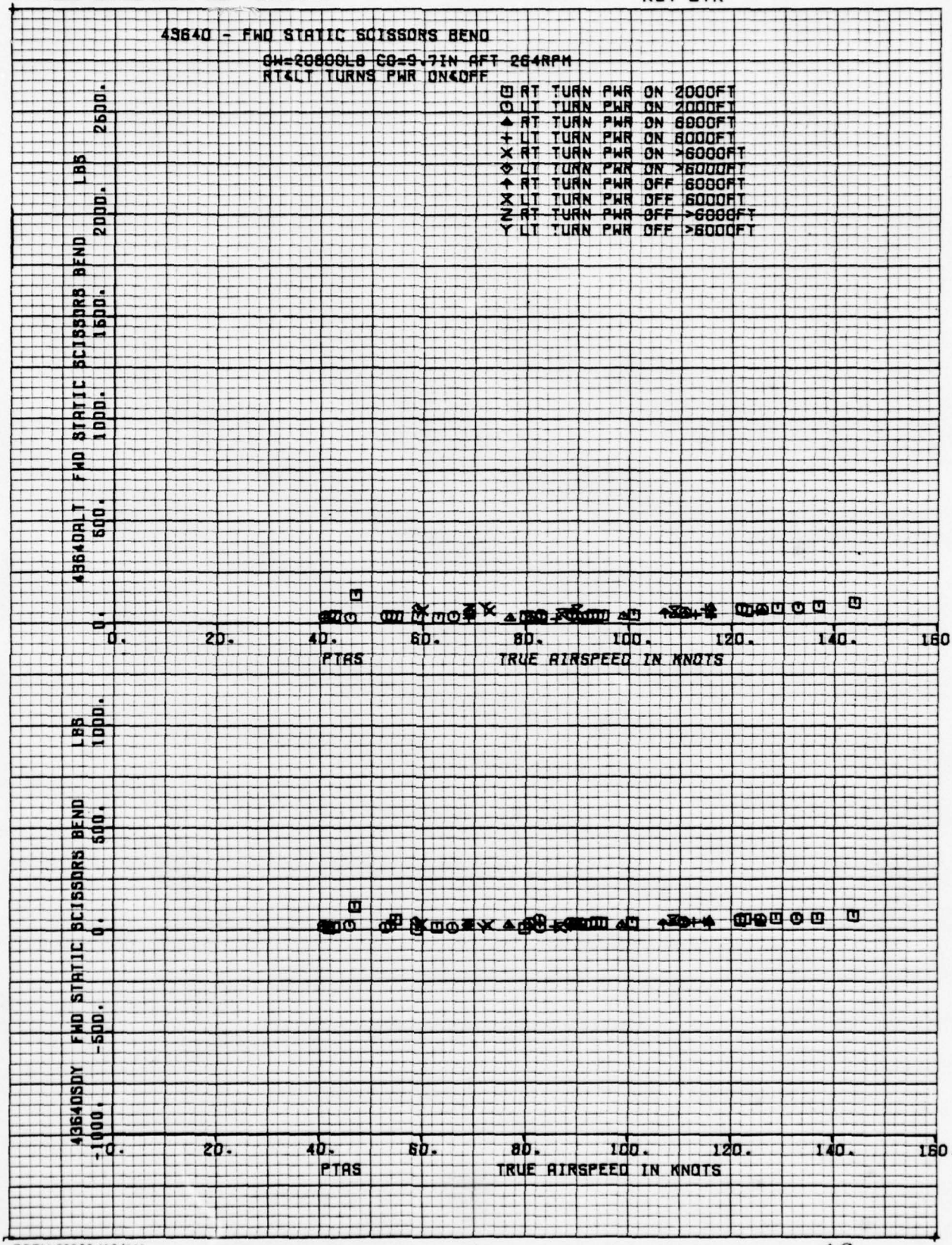
FORM 52300 (10/71)

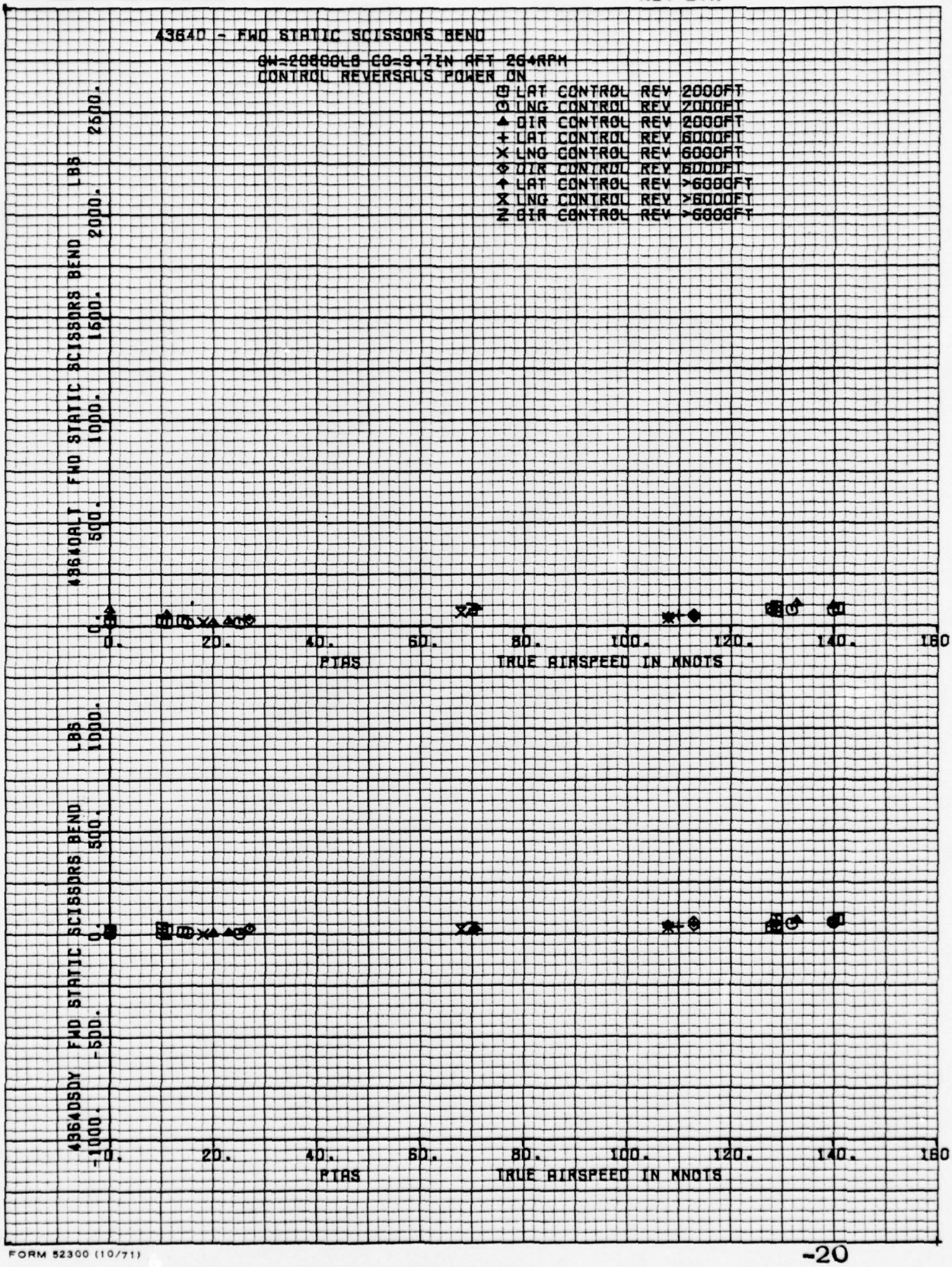
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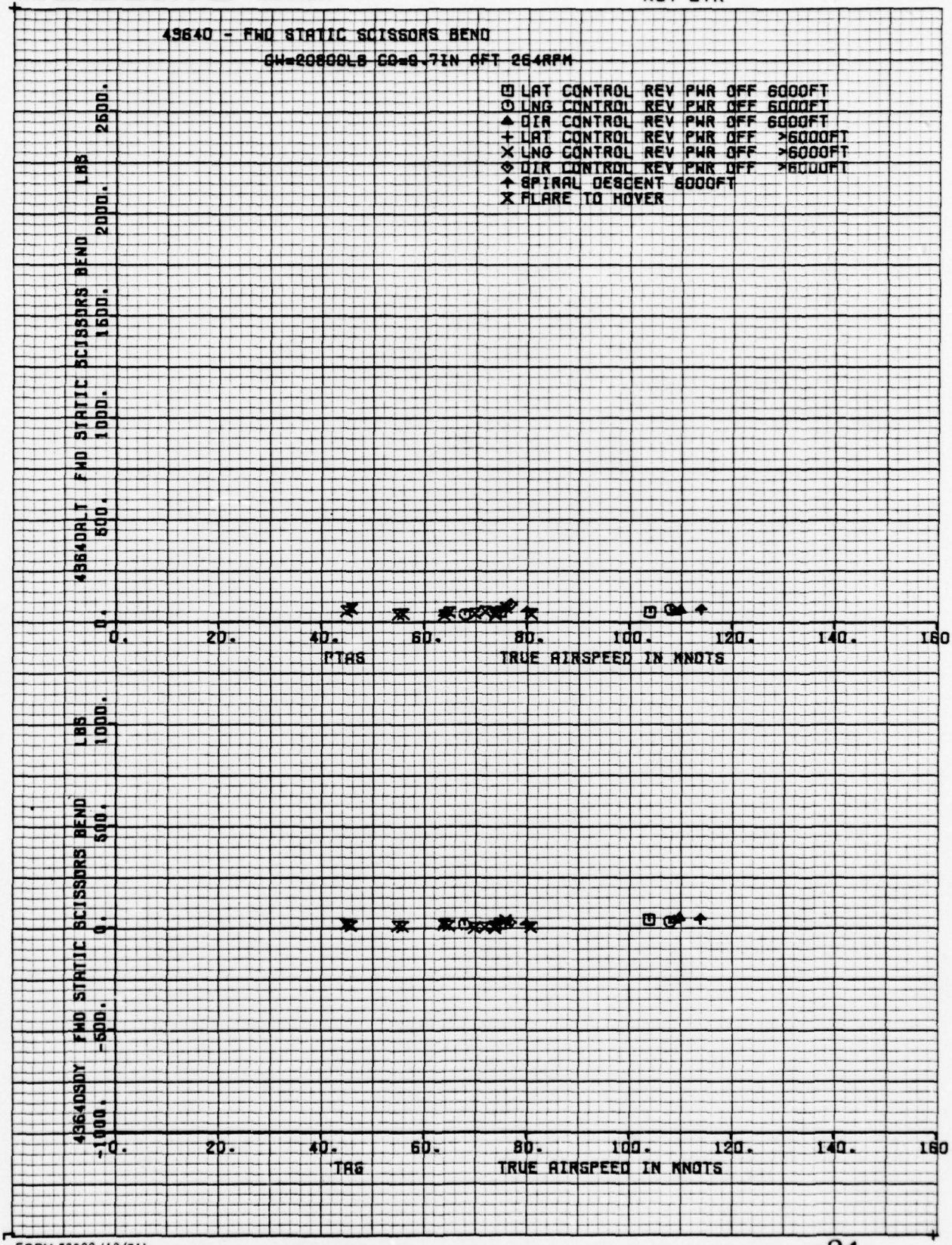
SHEET 167

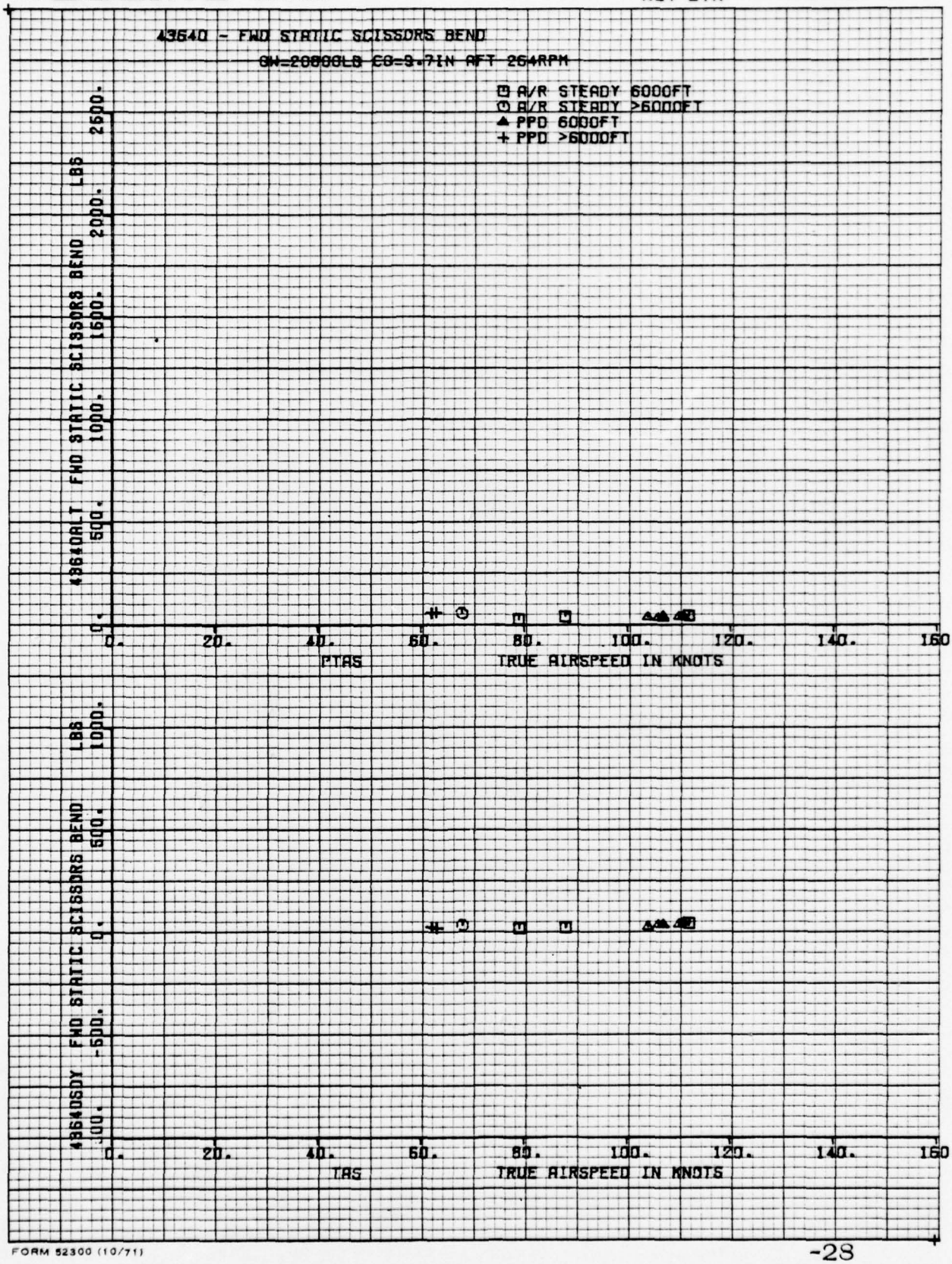
THE BOEING COMPANY
D210-11168-3
VOLUME 6
NUMBER
REV LTR

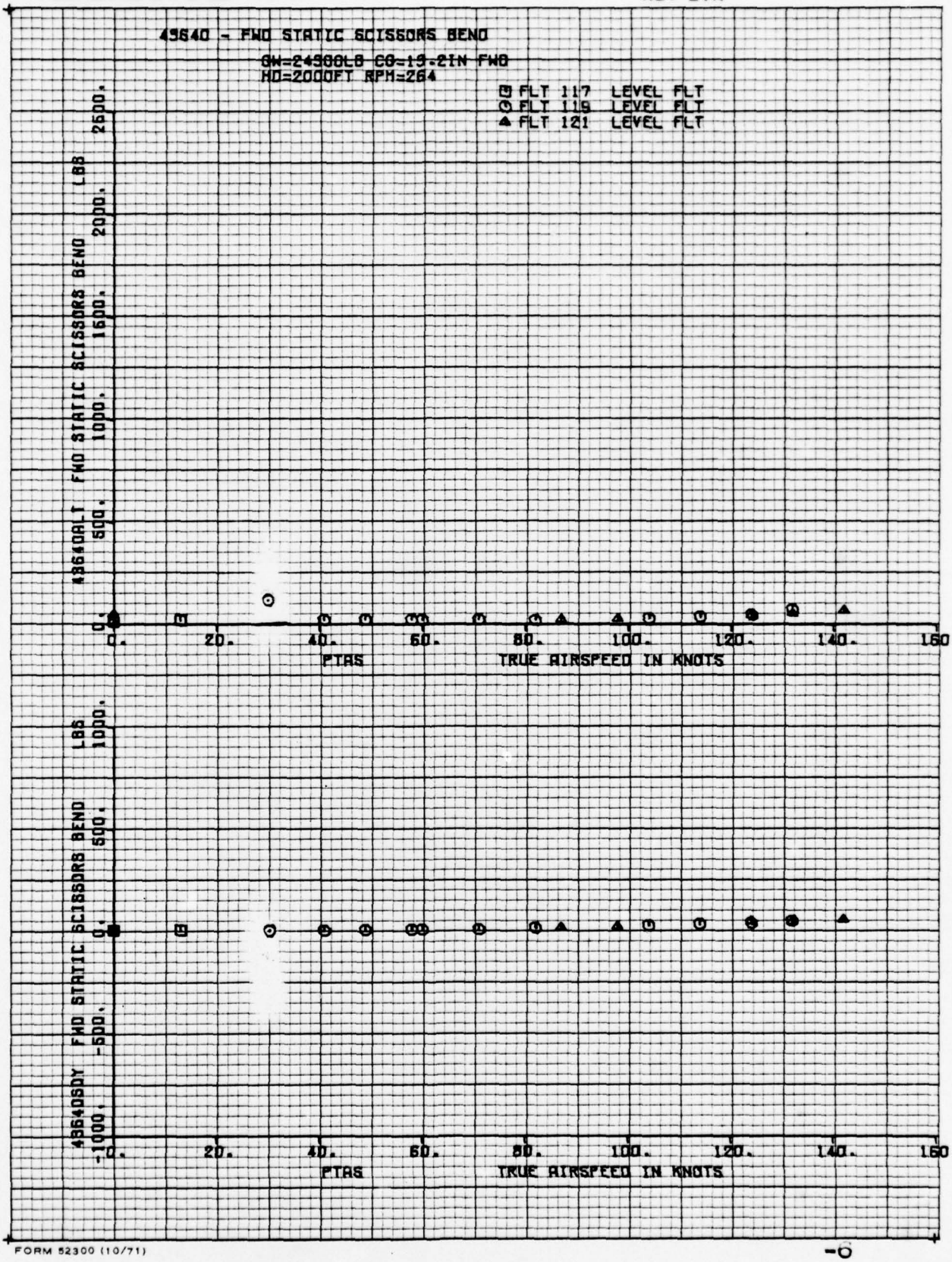

43640 - FWD STATIC SCISSORS BEND
GW=20000LB CG=9.7IN AFT 284RDM
PULLUPS-POWER ON & OFF
LNG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 6000FT
CP PULLUP PWR ON 6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR OFF ANY MD
CP PULLUP PWR OFF ANY ALT
APD RECOVERY ANY ALT
43640ALT FWD STATIC SCISSORS BEND LBS
2600.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
TAS
TRUE AIRSPEED IN KNOTS

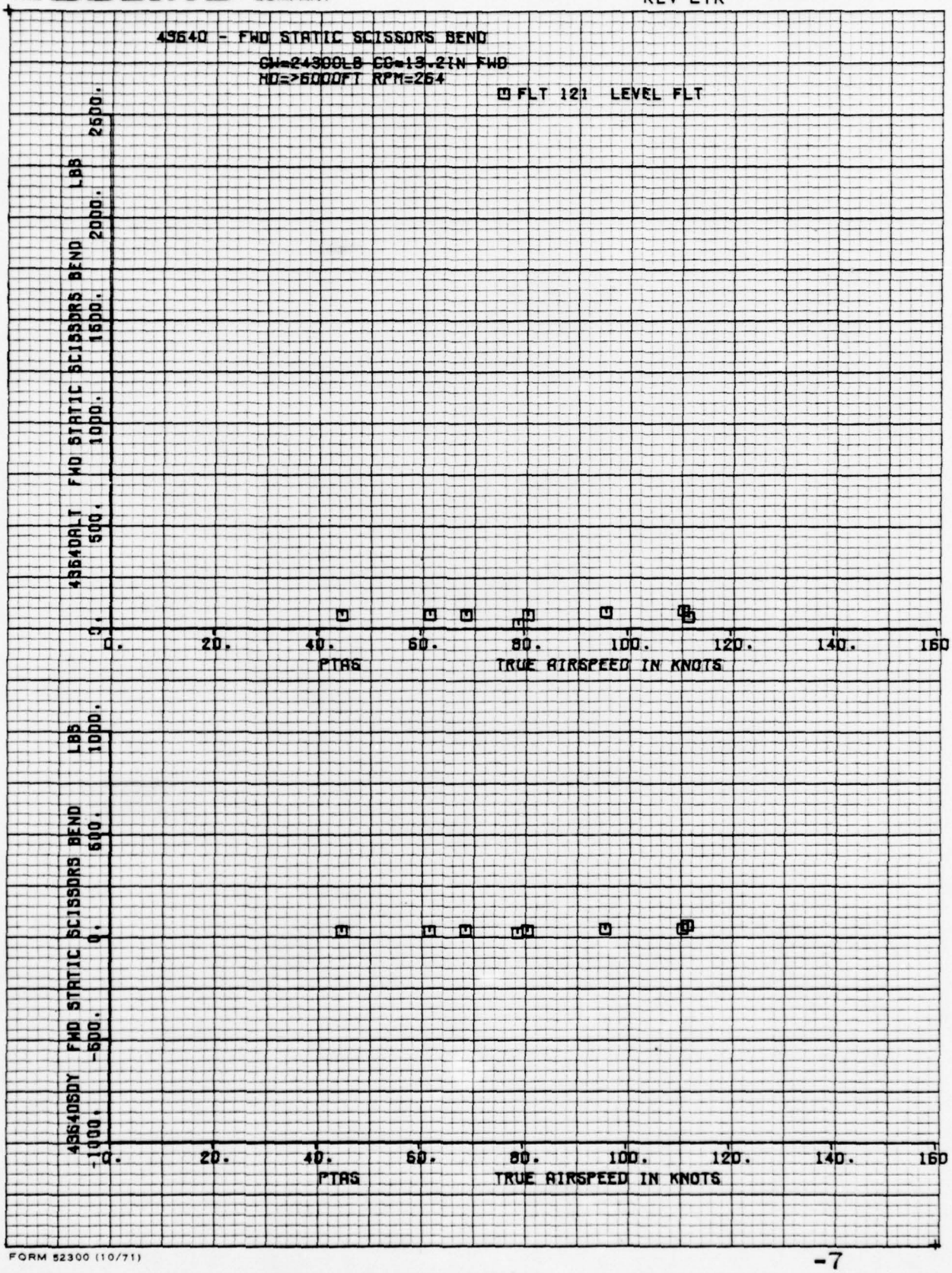

43640 - FWD STATIC SCISSORS BEND
GW=208000LB CG=9.7IN AFT 264RPM
RT&LT TURNS PWR ON&OFF
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
RT TURN PWR ON 6000FT
LT TURN PWR ON 6000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF 6000FT
LT TURN PWR OFF 6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
43640RLT FWD STATIC SCISSORS BEND LBS
2600.
2000.
1600.
1000.
600.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

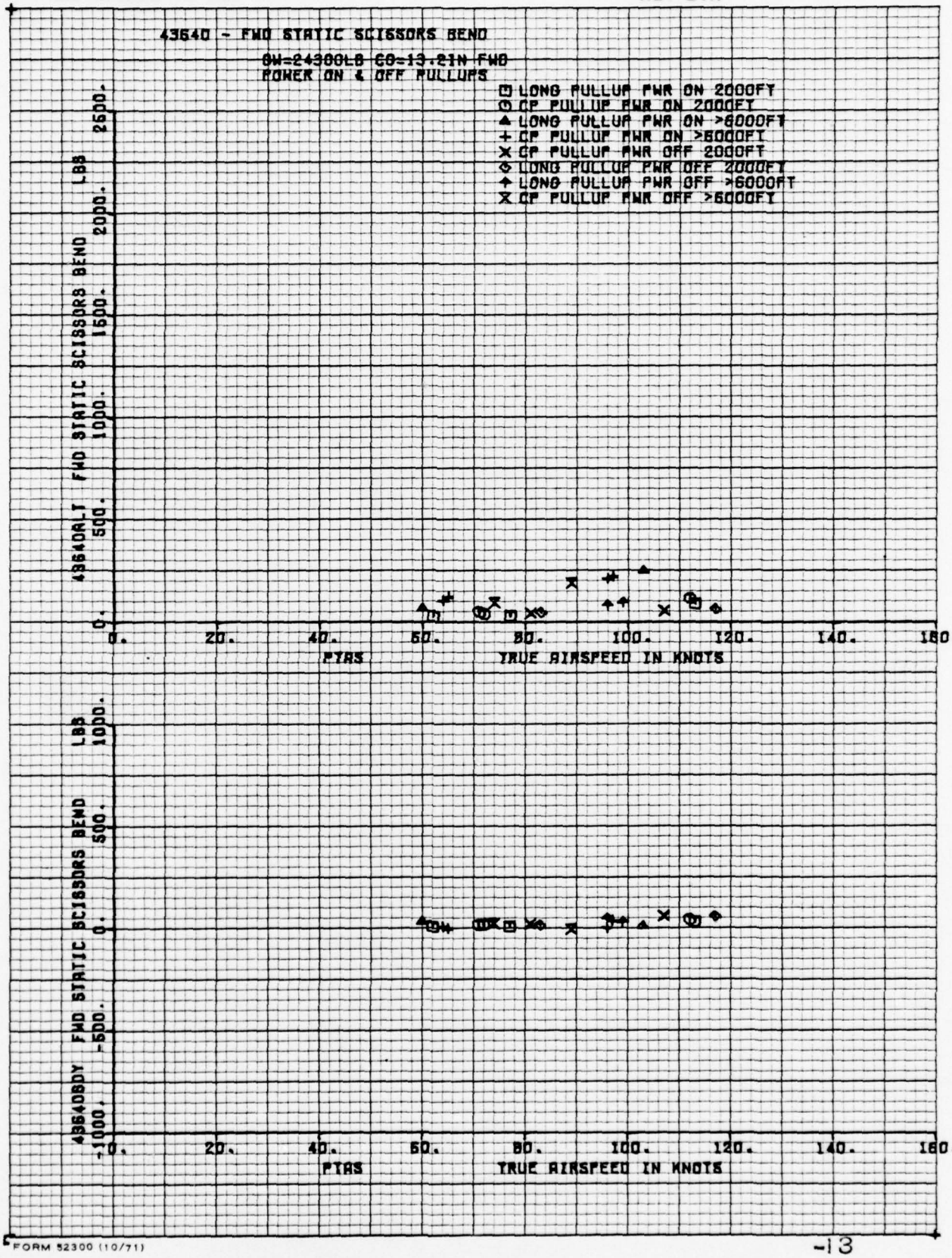

43640 - FWD STATIC SCISSORS BEND
GW=208000LB CG=9.7IN AFT 264RPM
CONTROL REVERSALS POWER ON
LAT CONTROL REV 2000FT
LNG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LNG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LNG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


49640 - FWD STATIC SCISSORS BEND
GW=20800LB CG=8.7IN AFT 264RPM
LAT CONTROL REV PWR OFF 6000FT
LNG CONTROL REV PWR OFF 6000FT
DIR CONTROL REV PWR OFF 6000FT
LAT CONTROL REV PWR OFF >6000FT
LNG CONTROL REV PWR OFF >6000FT
DIR CONTROL REV PWR OFF >6000FT
SPIRAL DESCENT 6000FT
FLARE TO HOVER
49640RLT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
49640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

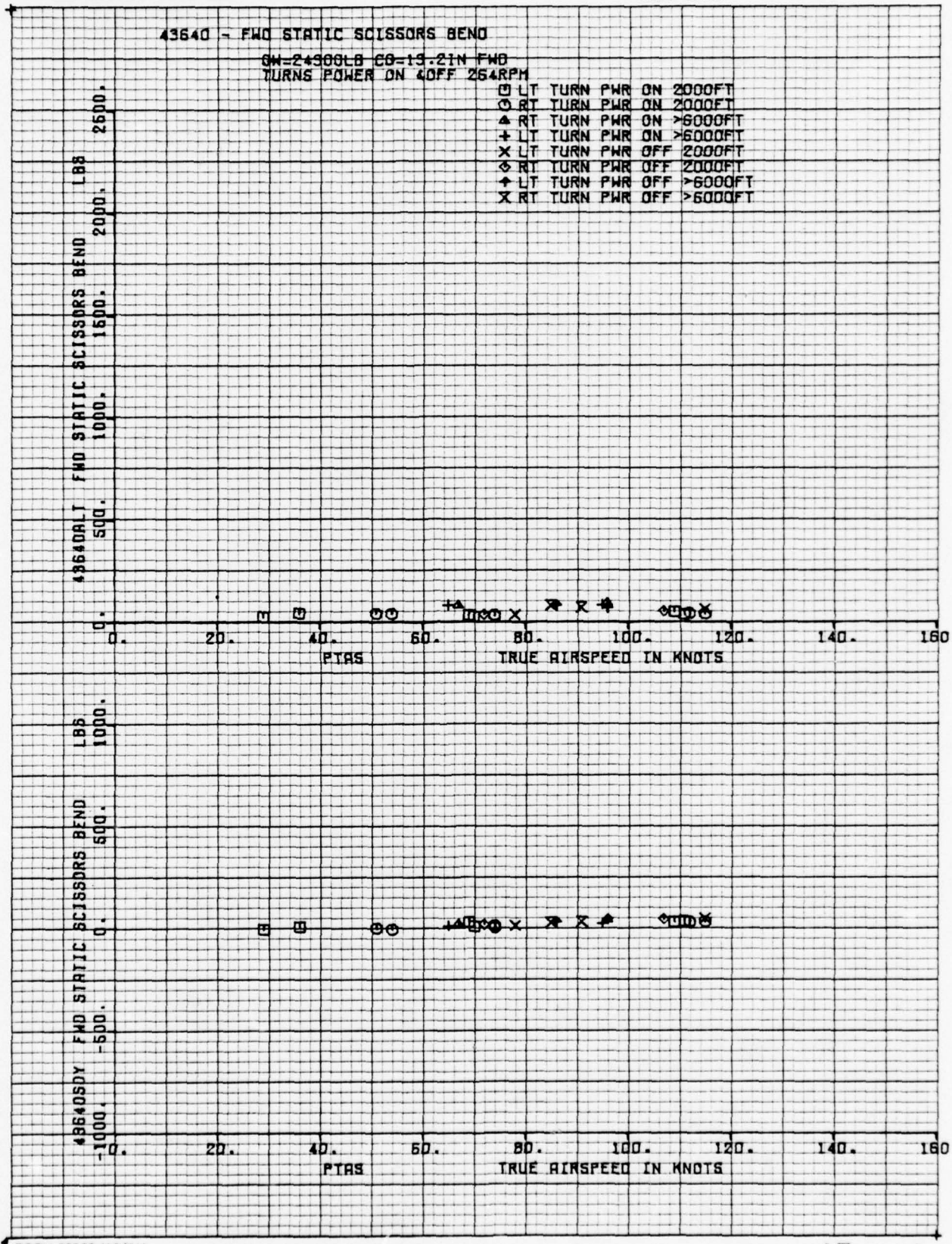

43640 - FWD STATIC SCISSORS BEND
GW=20000LB CG=3.7IN AFT 264RPM
A/R STEADY 6000FT
A/R STEADY >6000FT
PPD 6000FT
PPD >6000FT
43640ALT FWD STATIC SCISSORS BEND LBS
0.
500.
1000.
1500.
2000.
2500.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640DDY FWD STATIC SCISSORS BEND LBS
-1000.
-500.
0.
500.
1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
TAS
TRUE AIRSPEED IN KNOTS


49640 - FWD STATIC SCISSORS BEND
GW=249000LB CG=13.2IN FWD
HD=2000FT RPM=264
FLT 117 LEVEL FLT
FLT 119 LEVEL FLT
FLT 121 LEVEL FLT
49640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
49640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

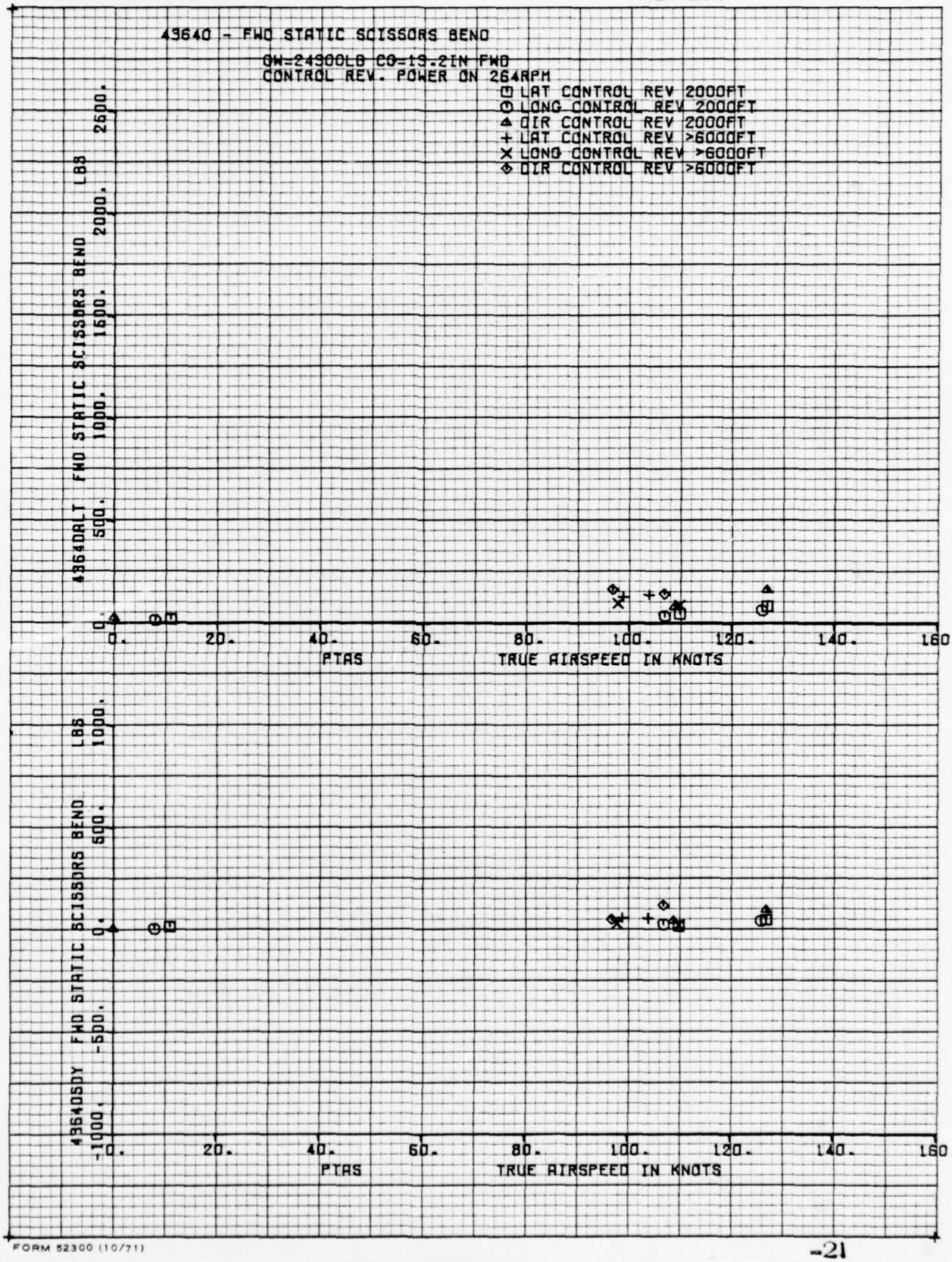

43640 - FWD STATIC SCISSORS BEND
GW=243000LB CG=13.2IN FWD
HO=>6000FT RPM=264
FLT 121 LEVEL FLT
43640ALT FWD STATIC SCISSORS BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
600.
0.
-600.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160
PTAS
TRUE AIRSPEED IN KNOTS

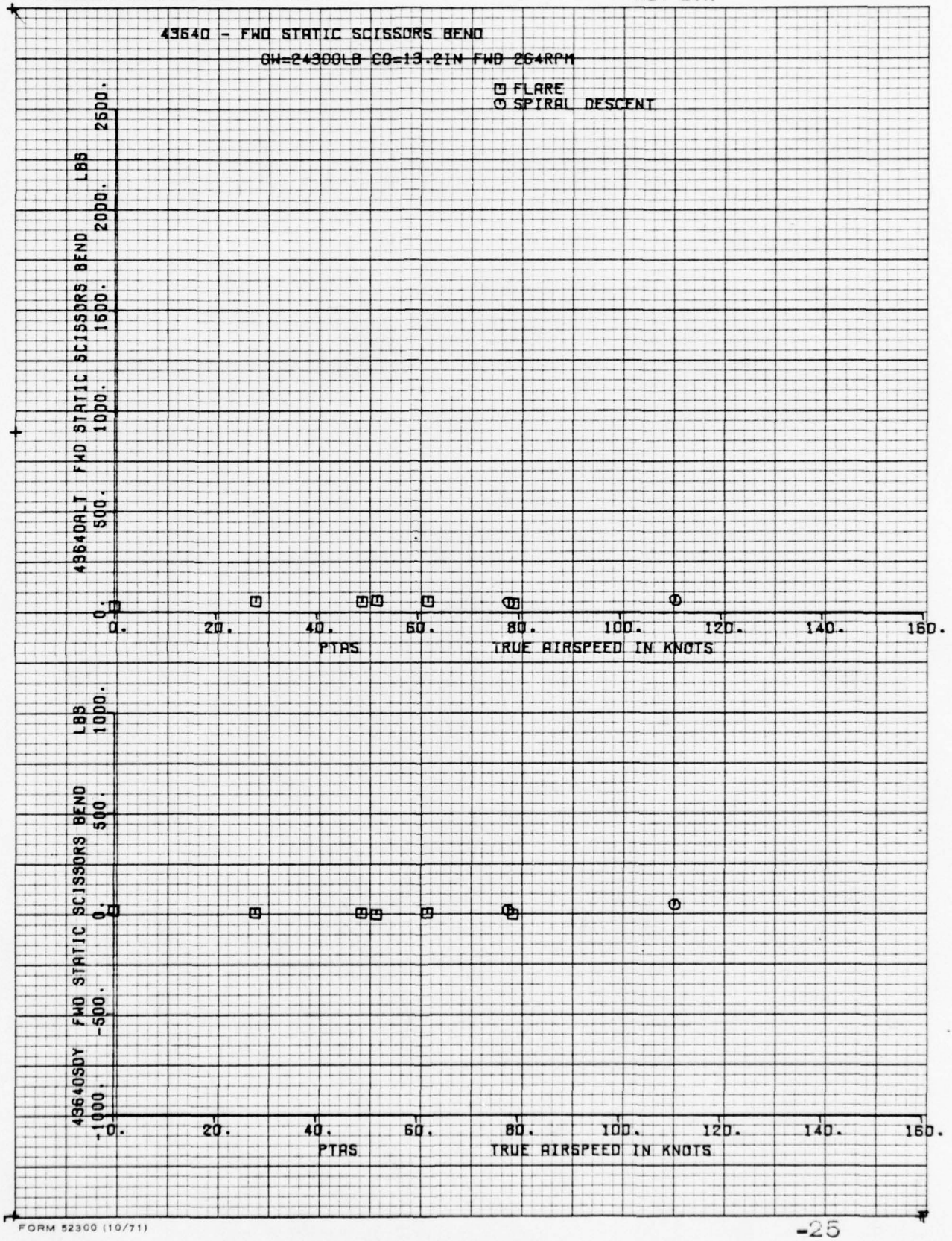

43640 - FWD STATIC SCISSORS BEND
GW=24300LB CG=13.21N FWD
POWER ON & OFF PULLUPS
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
CP PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
43640BDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

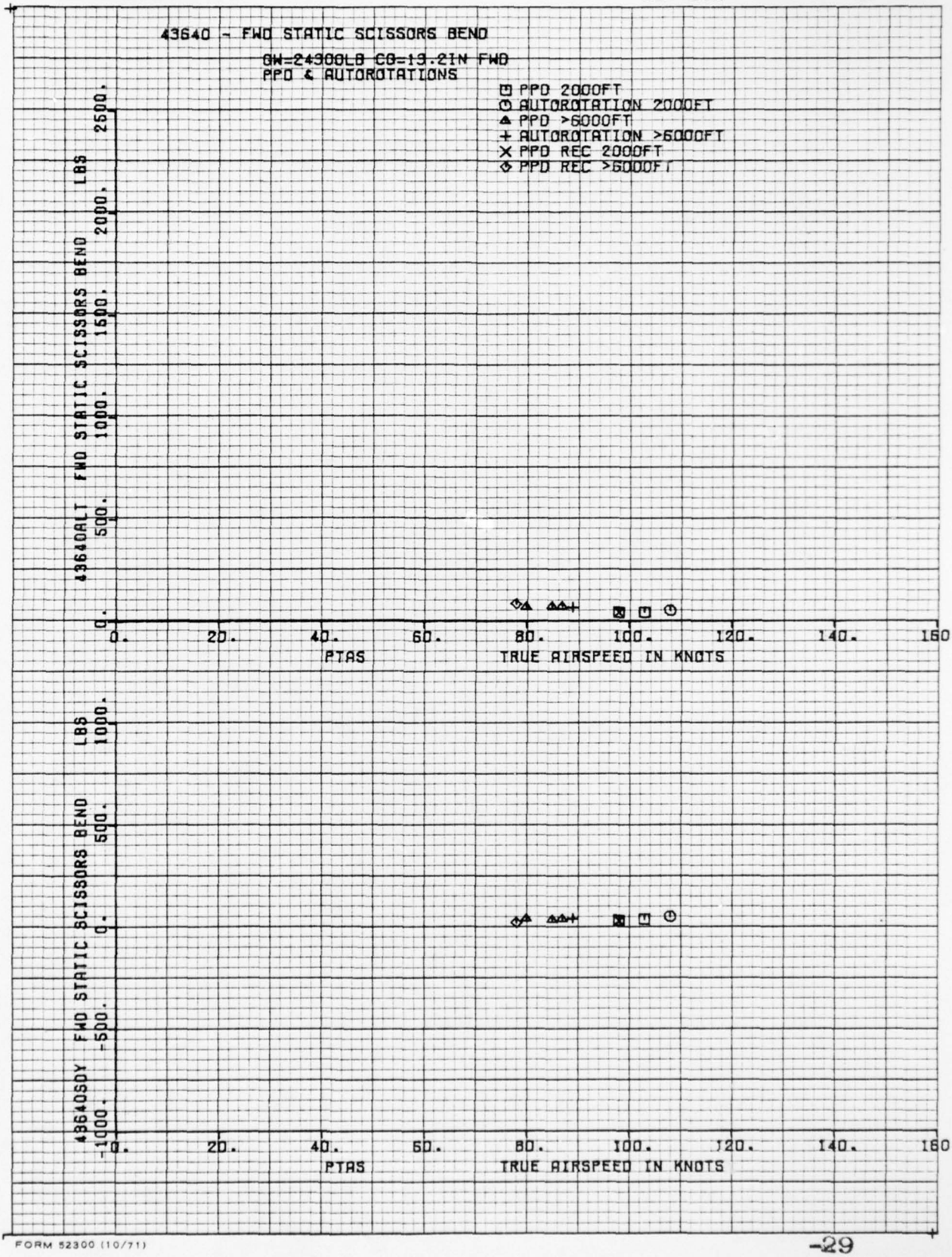
THE BOEING COMPANY

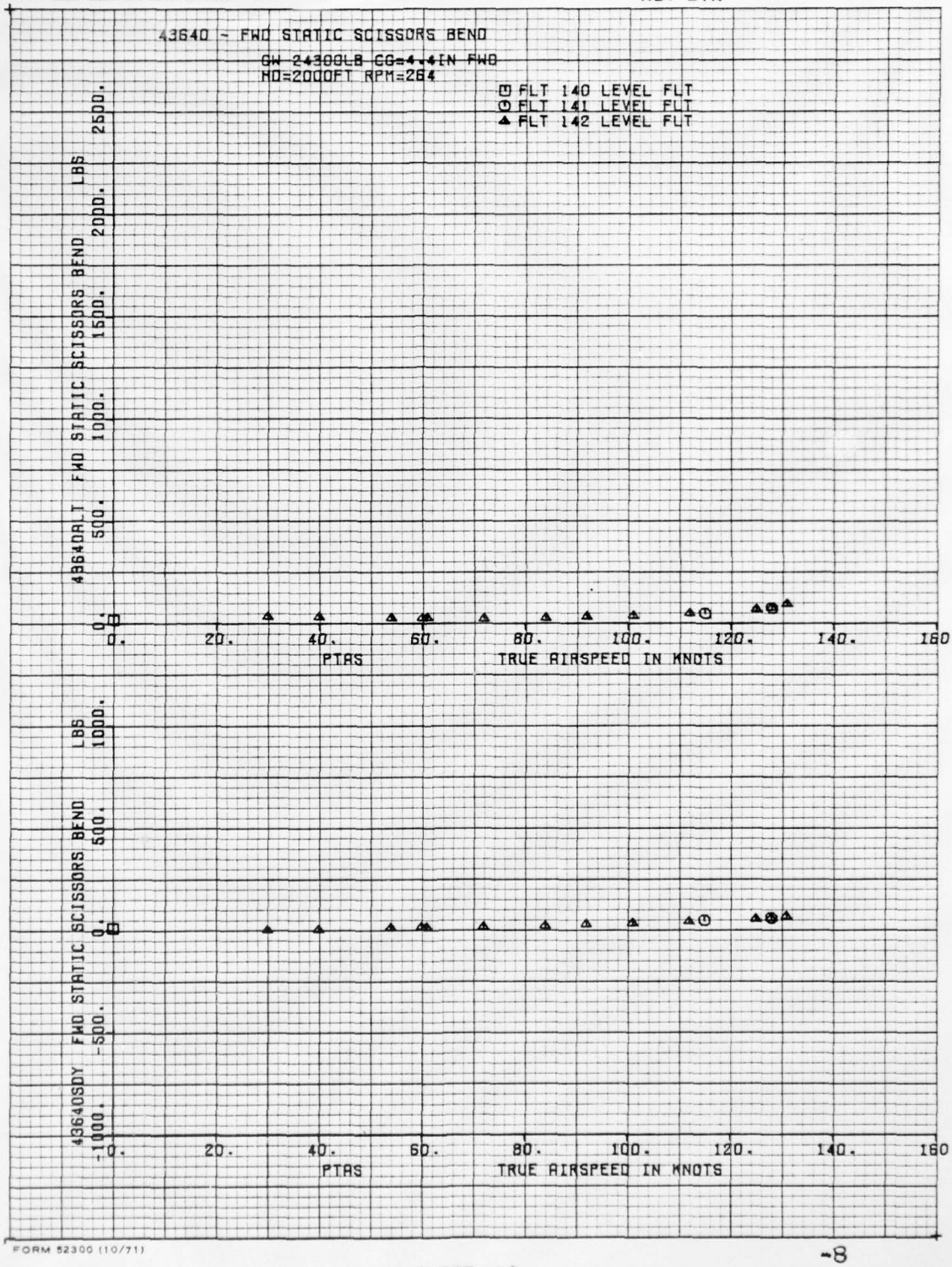


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43640 - FWD STATIC SCISSORS BEND
GW=24300LB CG=19.2IN FWD
CONTROL REV. POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

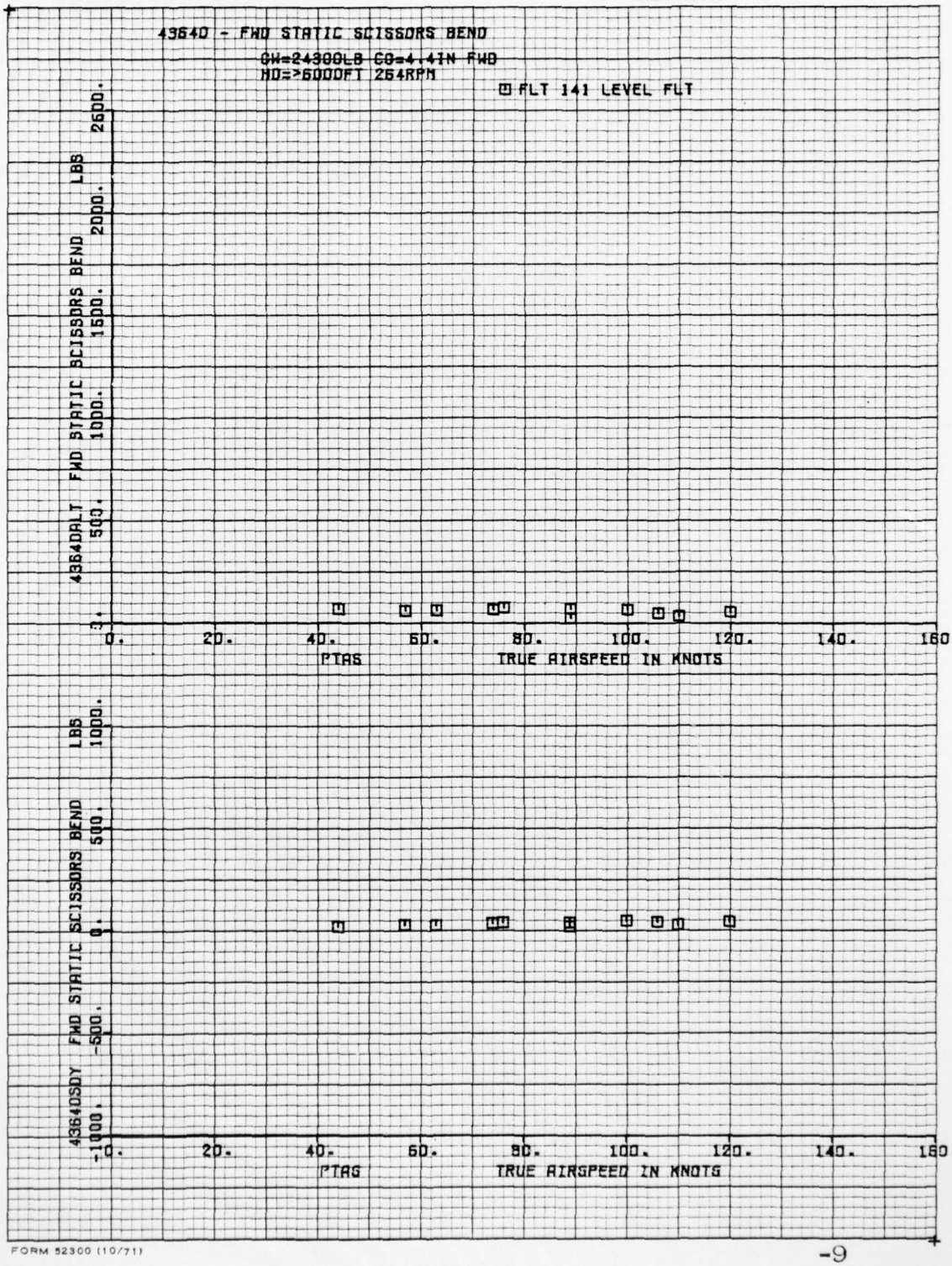

43640 - FWD STATIC SCISSORS BEND
GW=24300LB CG=13.2IN FWD 264RPM
FLARE
SPIRAL DESCENT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

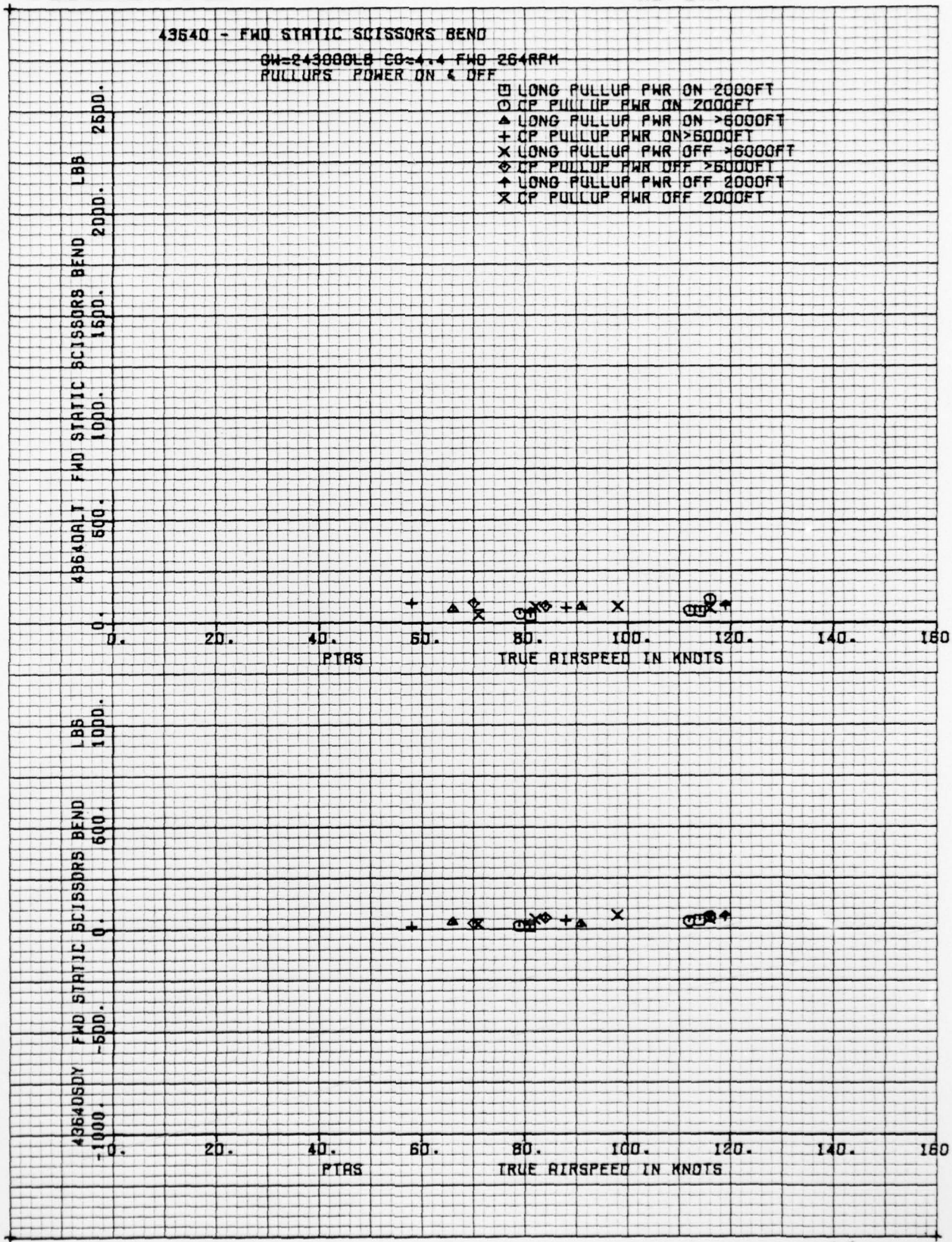

43640 - FWD STATIC SCISSORS BEND
GW=24300LB CG=13.2IN FWD
PPD & AUTOROTATIONS
PPD 2000FT
AUTOROTATION 2000FT
PPD >6000FT
AUTOROTATION >6000FT
PPD REC 2000FT
PPD REC >6000FT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


43640 - FWD STATIC SCISSORS BEND
GW 24300LB CG=4.4IN FWD
HD=2000FT RPM=264
FLT 140 LEVEL FLT
FLT 141 LEVEL FLT
FLT 142 LEVEL FLT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

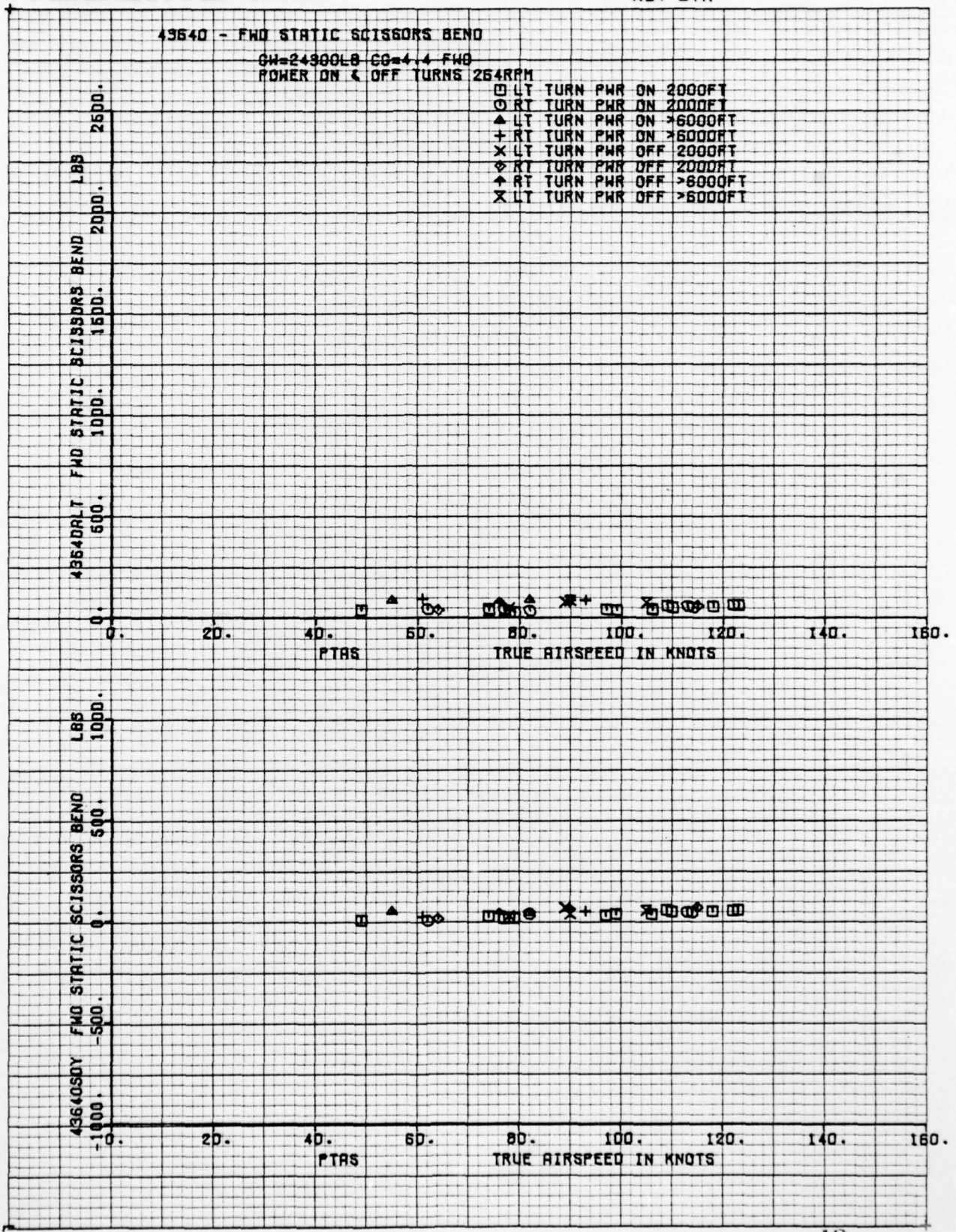
THE BOEING COMPANY

NUMBER D210-11168-3
REV LTR VOLUME 6

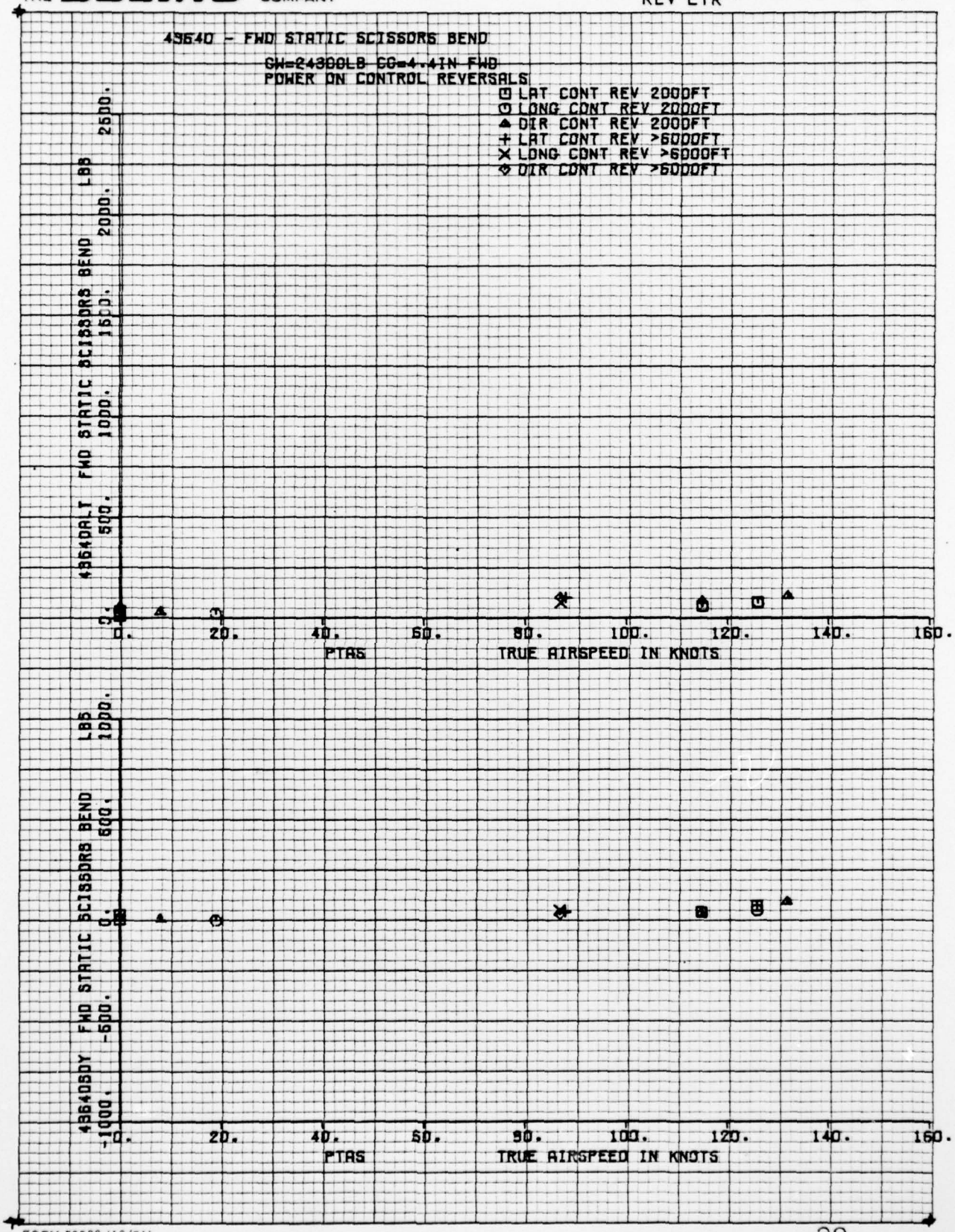


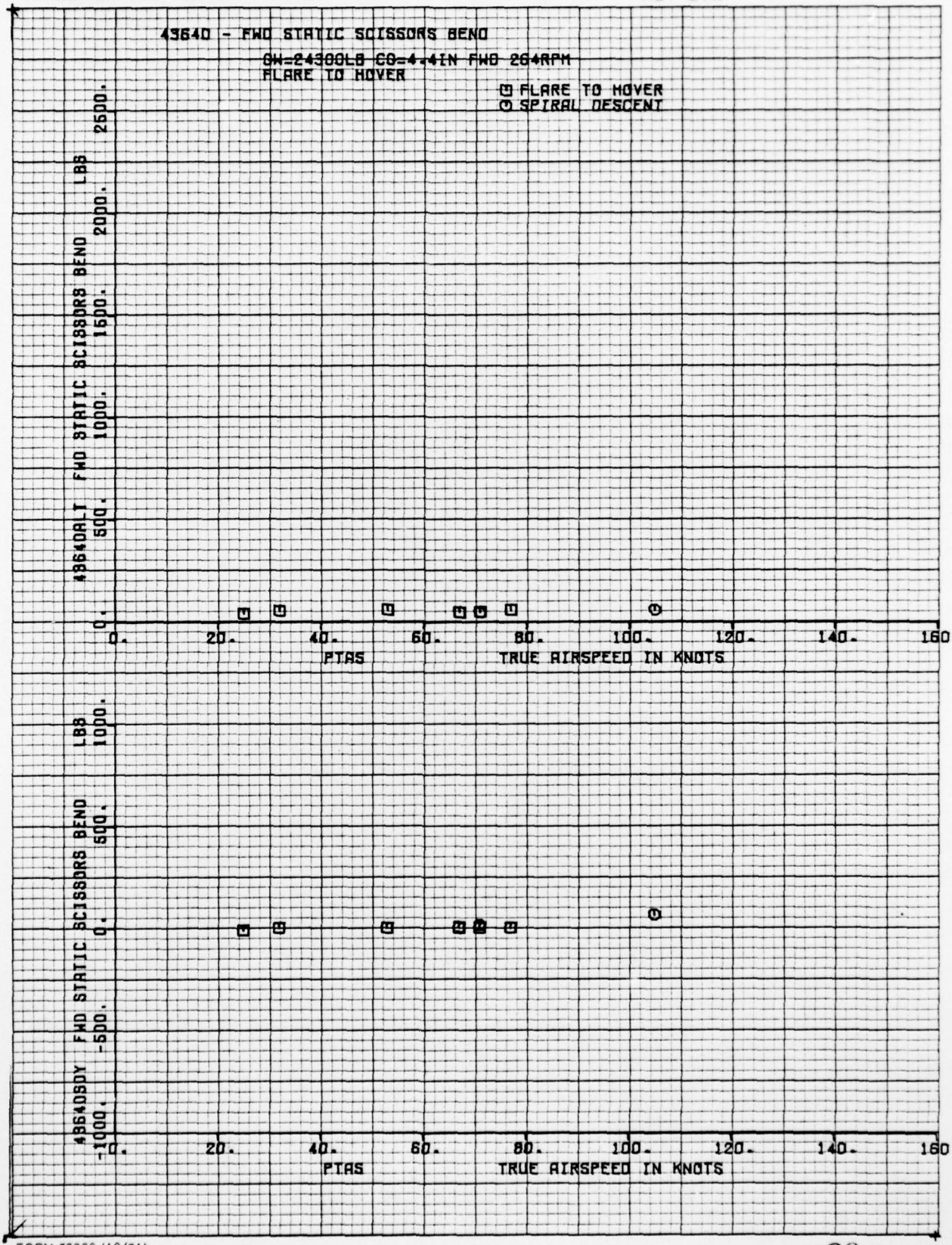

43640 - FWD STATIC SCISSORS BEND
GW=243000LB CG=4.4 FWD 264RPM
PULLUPS POWER ON & OFF
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON>6000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
LONG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
43640ALT FWD STATIC SCISSORS BEND LBS
0.
600.
1000.
1600.
2000.
2600.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
-1000.
-500.
0.
500.
1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

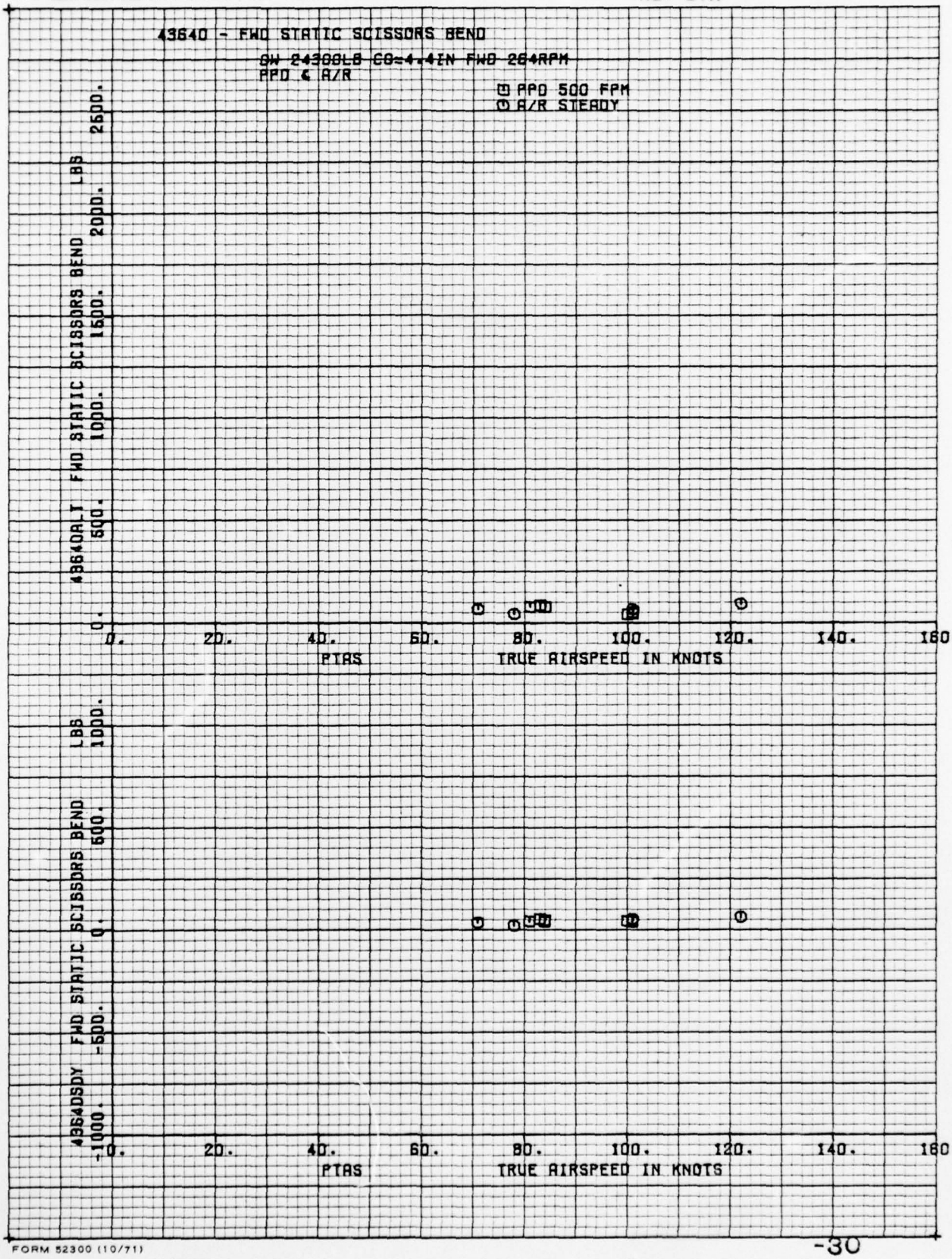


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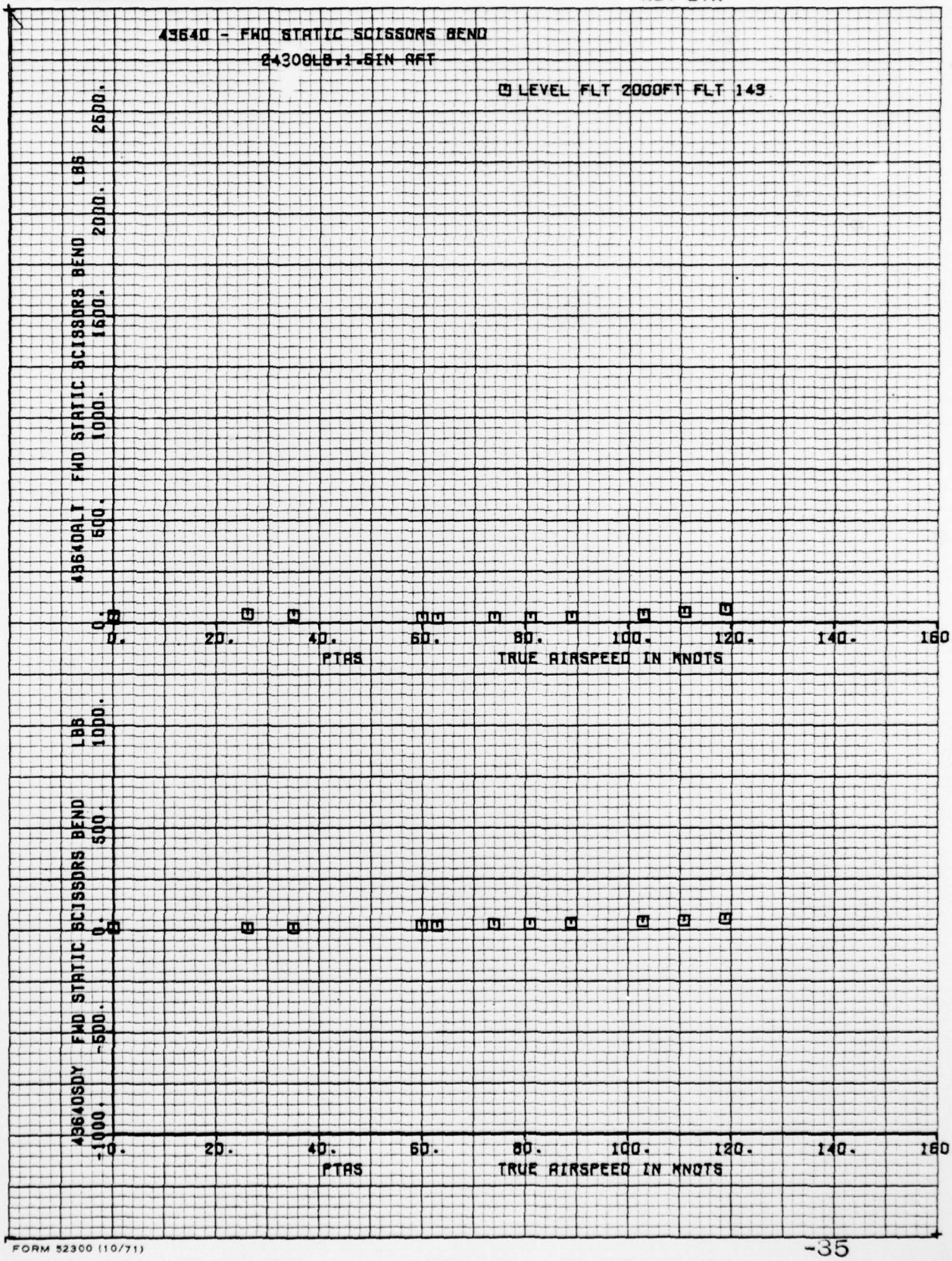

43640 - FWD STATIC SCISSORS BEND
GW=243000LB CG=4.4IN FWD
POWER ON CONTROL REVERSALS
LAT CONT REV 2000FT
LONG CONT REV 2000FT
DIR CONT REV 2000FT
LAT CONT REV >6000FT
LONG CONT REV >6000FT
DIR CONT REV >6000FT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640SDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


43640 - FWD STATIC SCISSORS BEND
GW=24300LB CG=4.4IN FWD 264RPM
FLARE TO HOVER
FLARE TO HOVER
SPIRAL DESCENT
43640ALT FWD STATIC SCISSORS BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43640BDY FWD STATIC SCISSORS BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

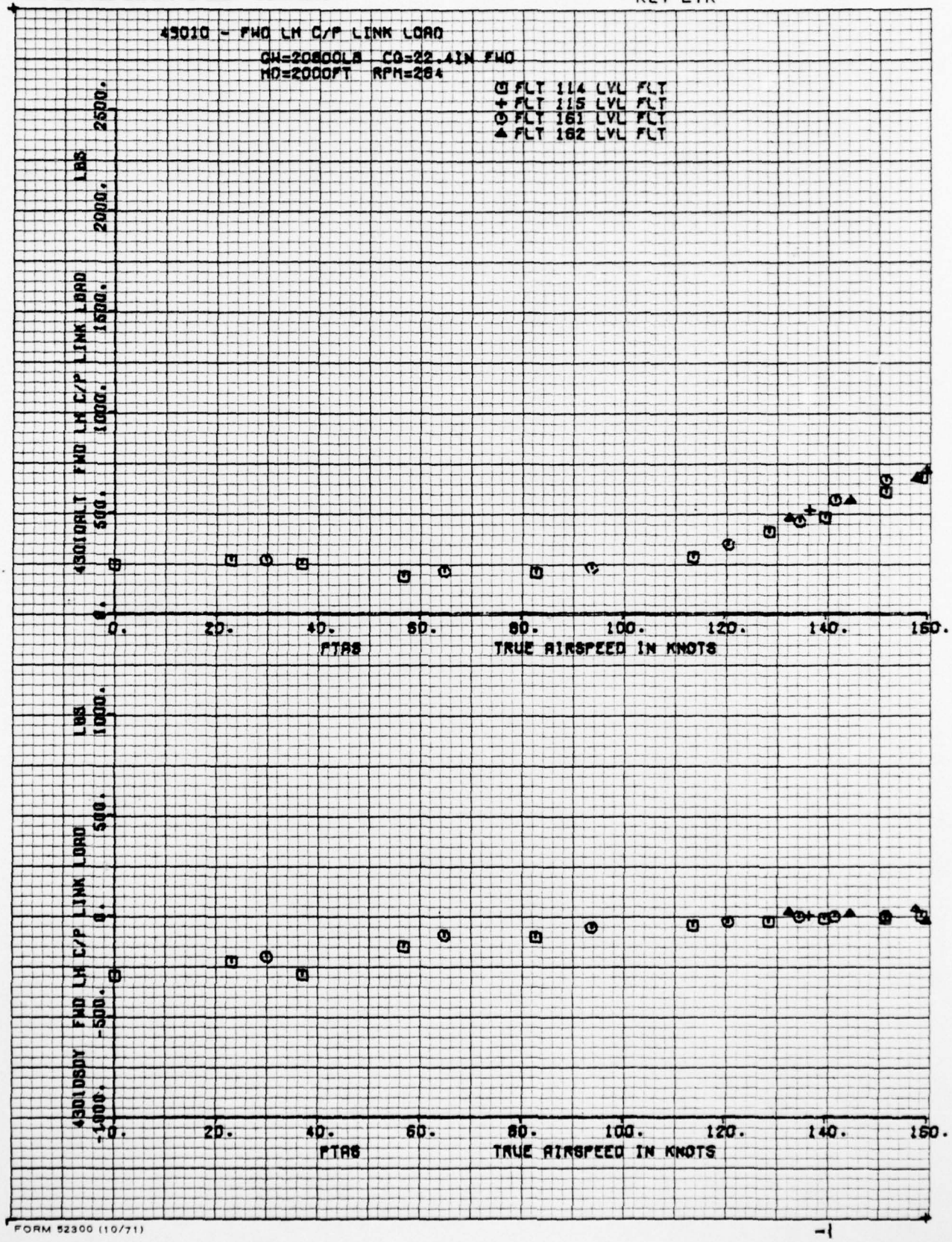
THE BOEING COMPANY

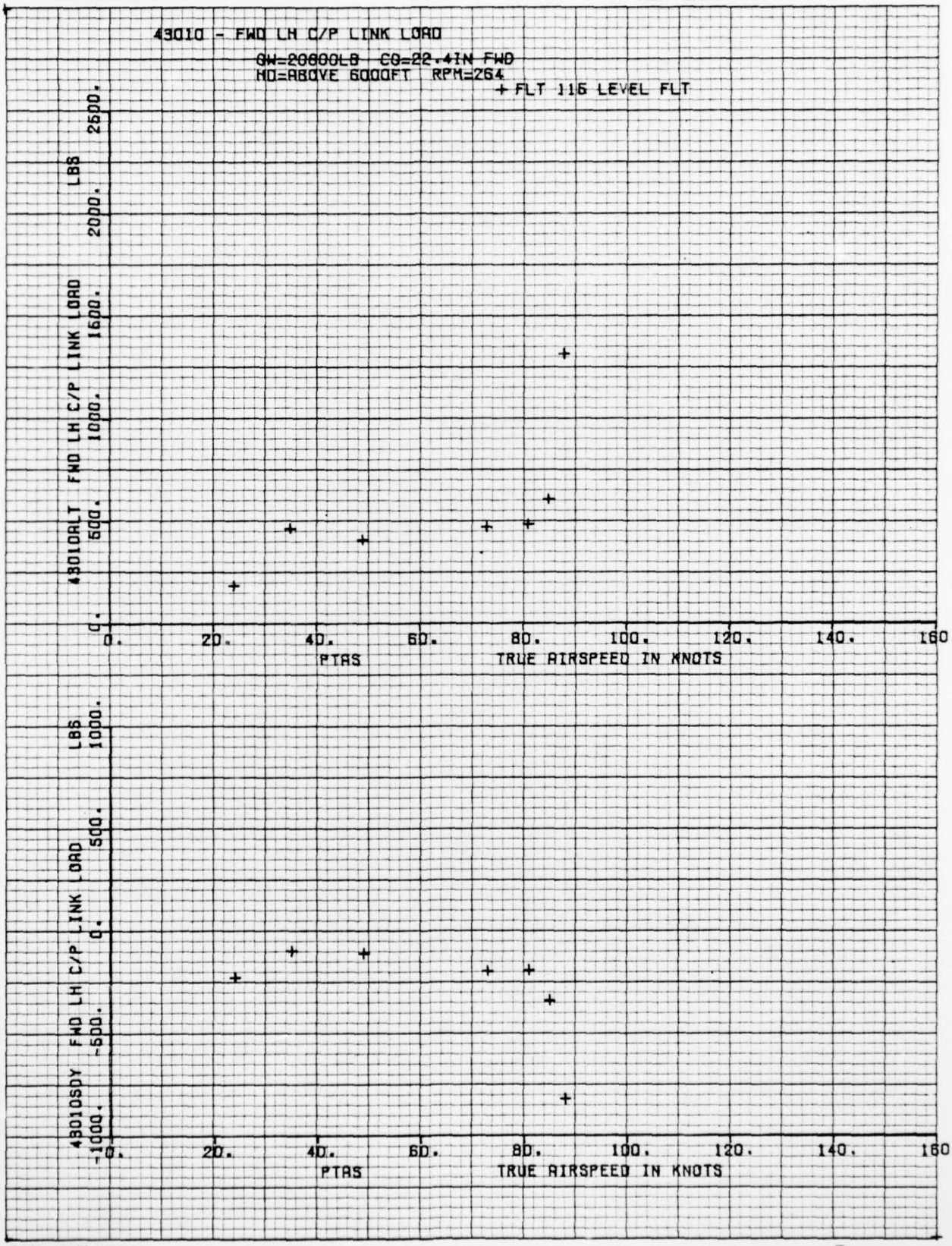


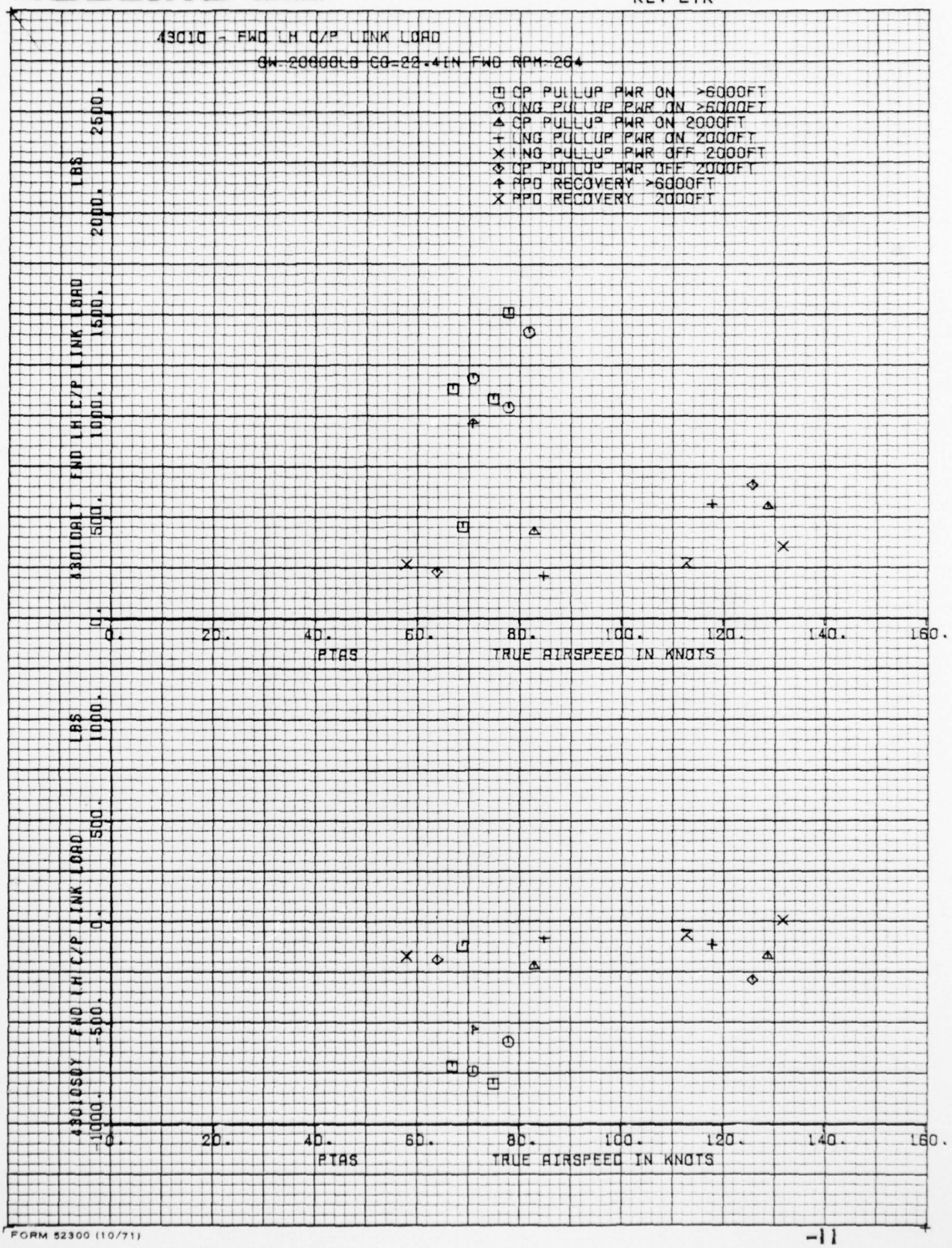
FORM 52300 (10/71)

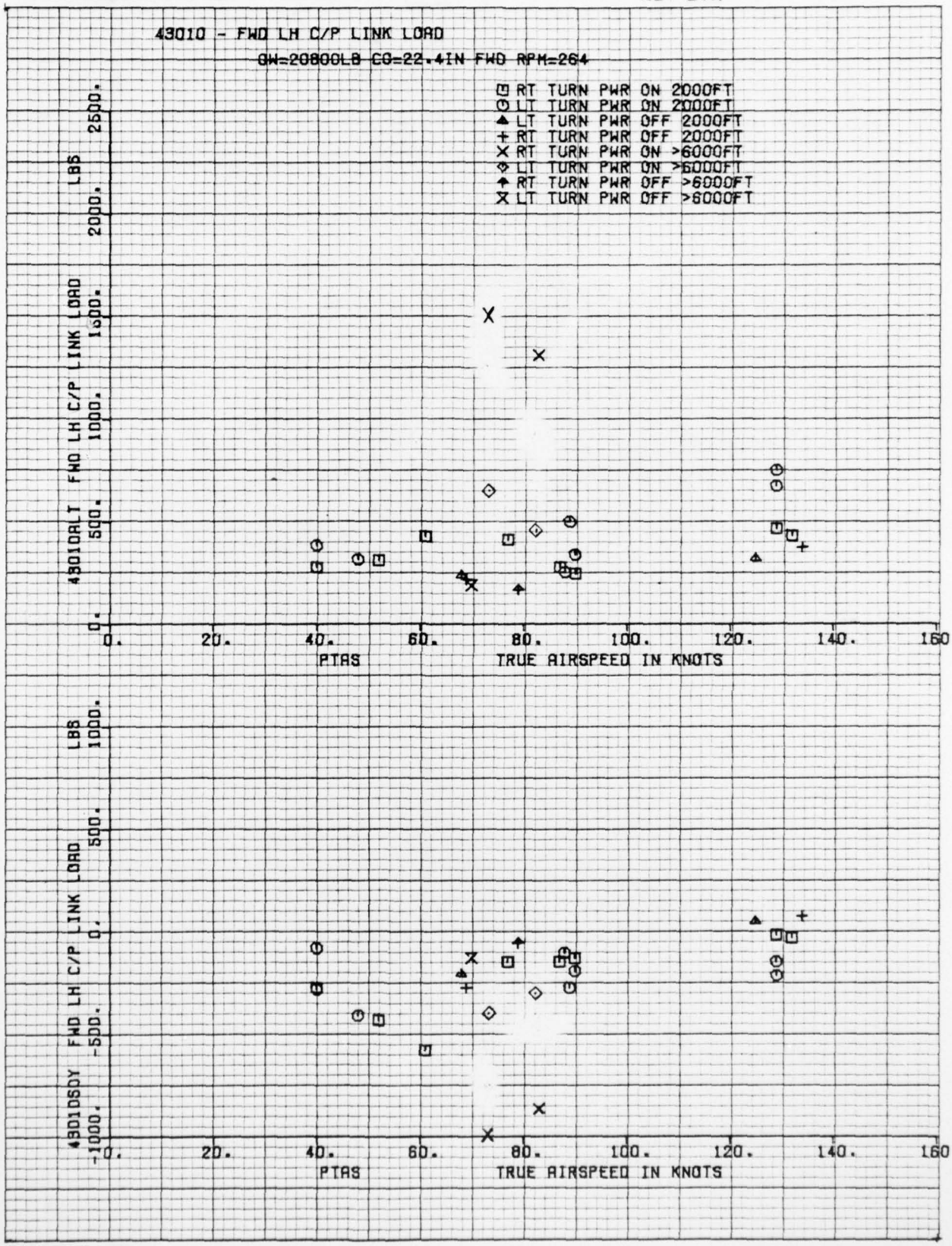

43640 - FWD STATIC SCISSORS BEND
243008L8 v1.6IN AFT
LEVEL FLT 2000FT FLT 143
43640ALT FWD STATIC SCISSORS BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
LBS
1000.
500.
0.
-500.
-1000.
43640SDY FWD STATIC SCISSORS BEND
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

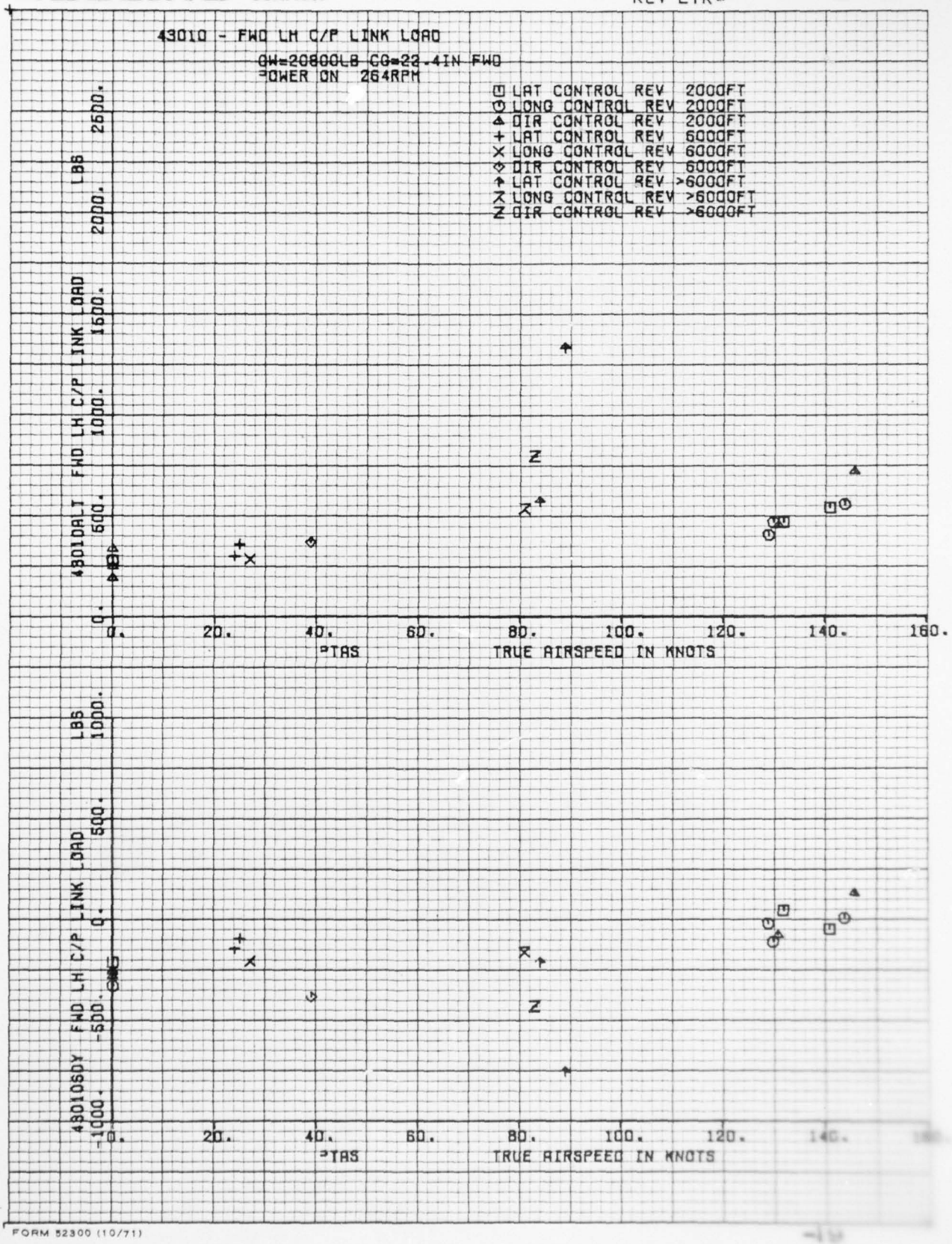
4.6 Forward L.H. C/P Link


43010 - FWD LH C/P LINK LOAD
GW=208000LB CG=22.4IN FWD
HO=2000FT RPM=284
FLT 114 LVL FLT
FLT 115 LVL FLT
FLT 161 LVL FLT
FLT 162 LVL FLT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS TRUE AIRSPEED IN KNOTS
43010BDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS TRUE AIRSPEED IN KNOTS


43010 - FWD LH C/P LINK LOAD
GW=20800LB CG=22.41N FWD
HO=ABOVE 6000FT RPM=264
+ FLT 116 LEVEL FLT
43010ALT FWD LH C/P LINK LOAD LBS
2600.
2000.
1600.
1000.
600.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS


43010 - FWD LH C/P LINK LOAD
GW-206000LB CG=22.4IN FWD RPM-264
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 2000FT
LNG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
RPD RECOVERY >6000FT
RPD RECOVERY 2000FT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
43010SOY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

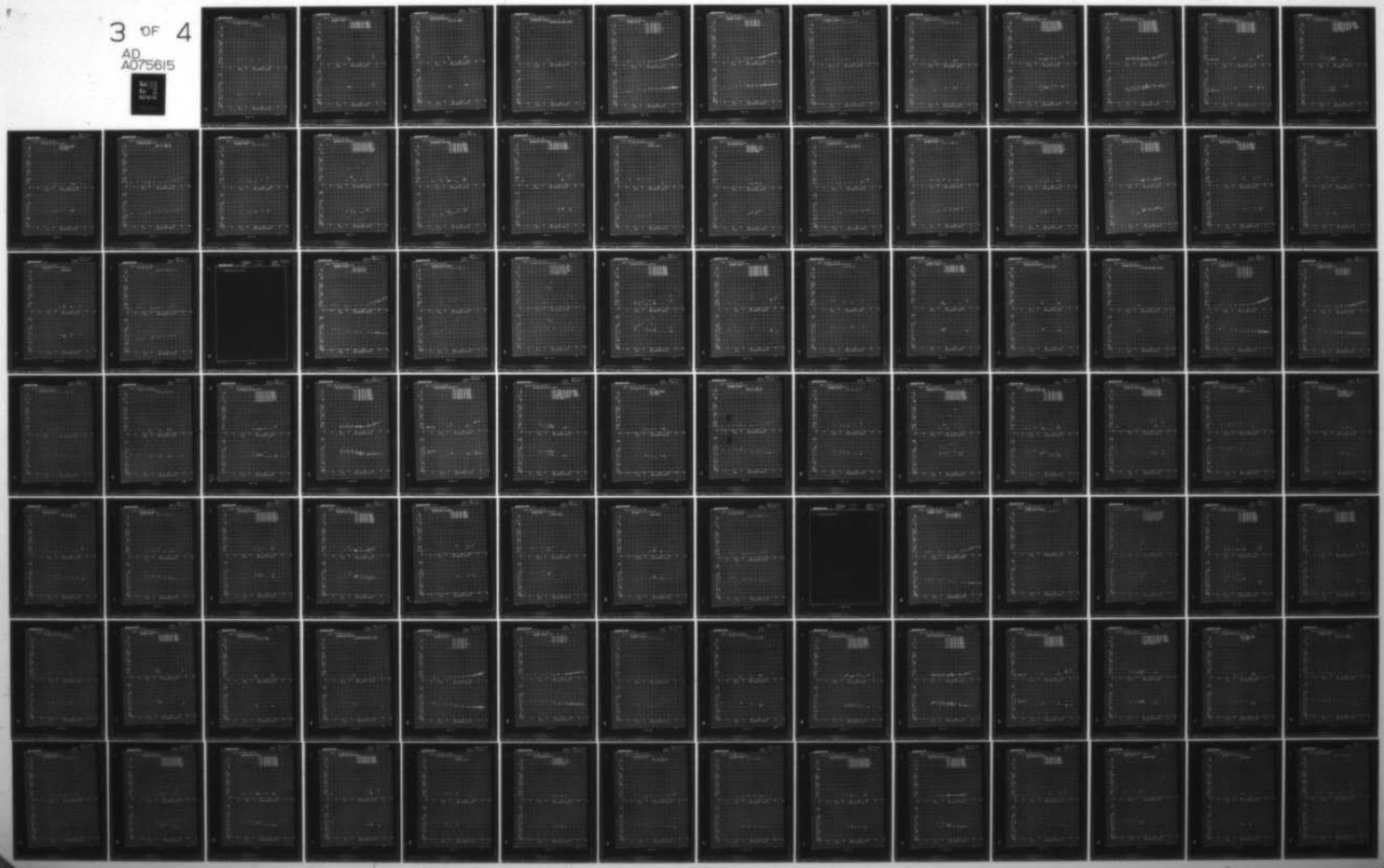

43010 - FWD LH C/P LINK LOAD
GW=20800LB CG=22.4IN FWD RPM=264
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

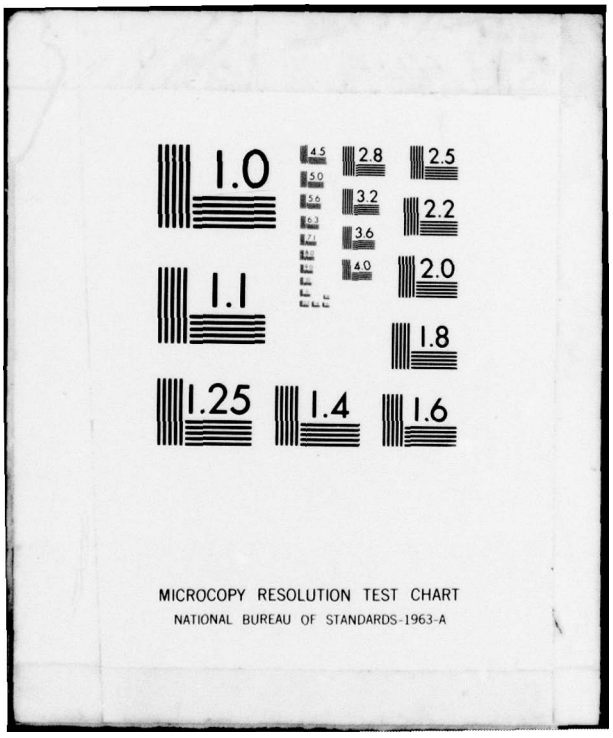


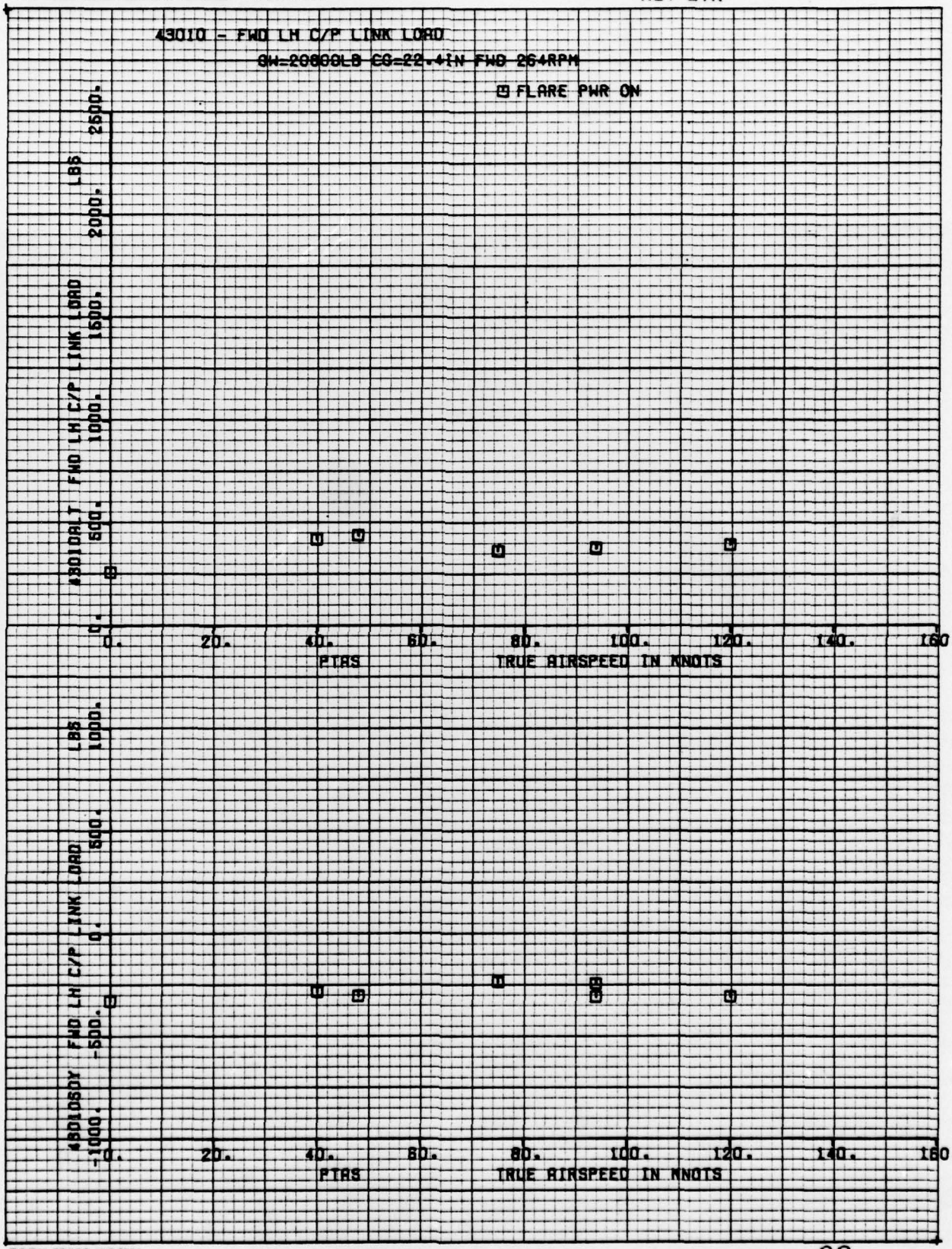
FORM 52300 (10/71)

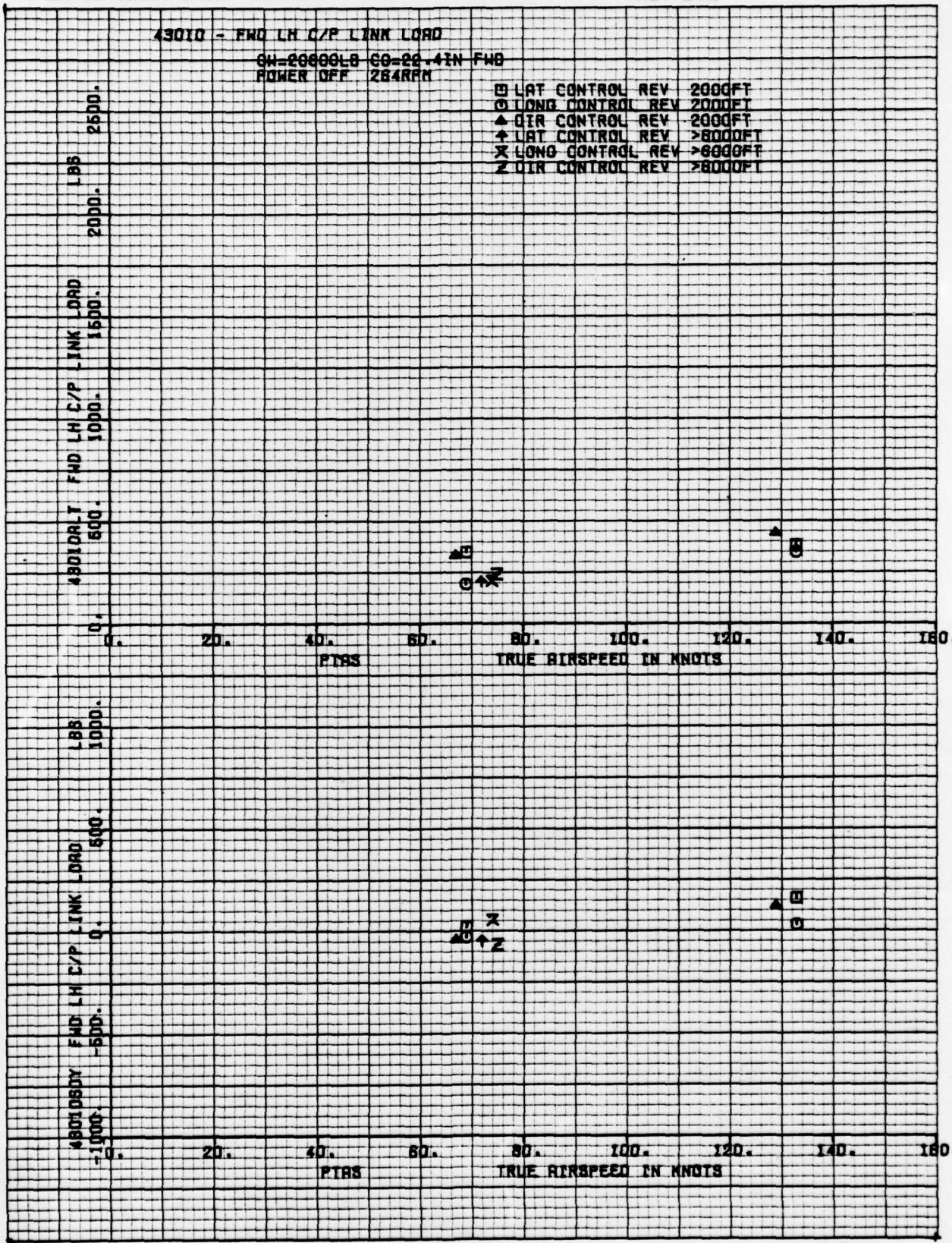
AD-A075 615 BOEING VERTOL CO PHILADELPHIA PA F/G 1/3
CH-46 COMPOSITE ROTOR BLADE FLIGHT STRESS SURVEY DATA. VOLUME V--ETC(U)
1978 R AIELLO, J BENDO N00019-75-C-0396
UNCLASSIFIED D210-11168-3-VOL-6 NL

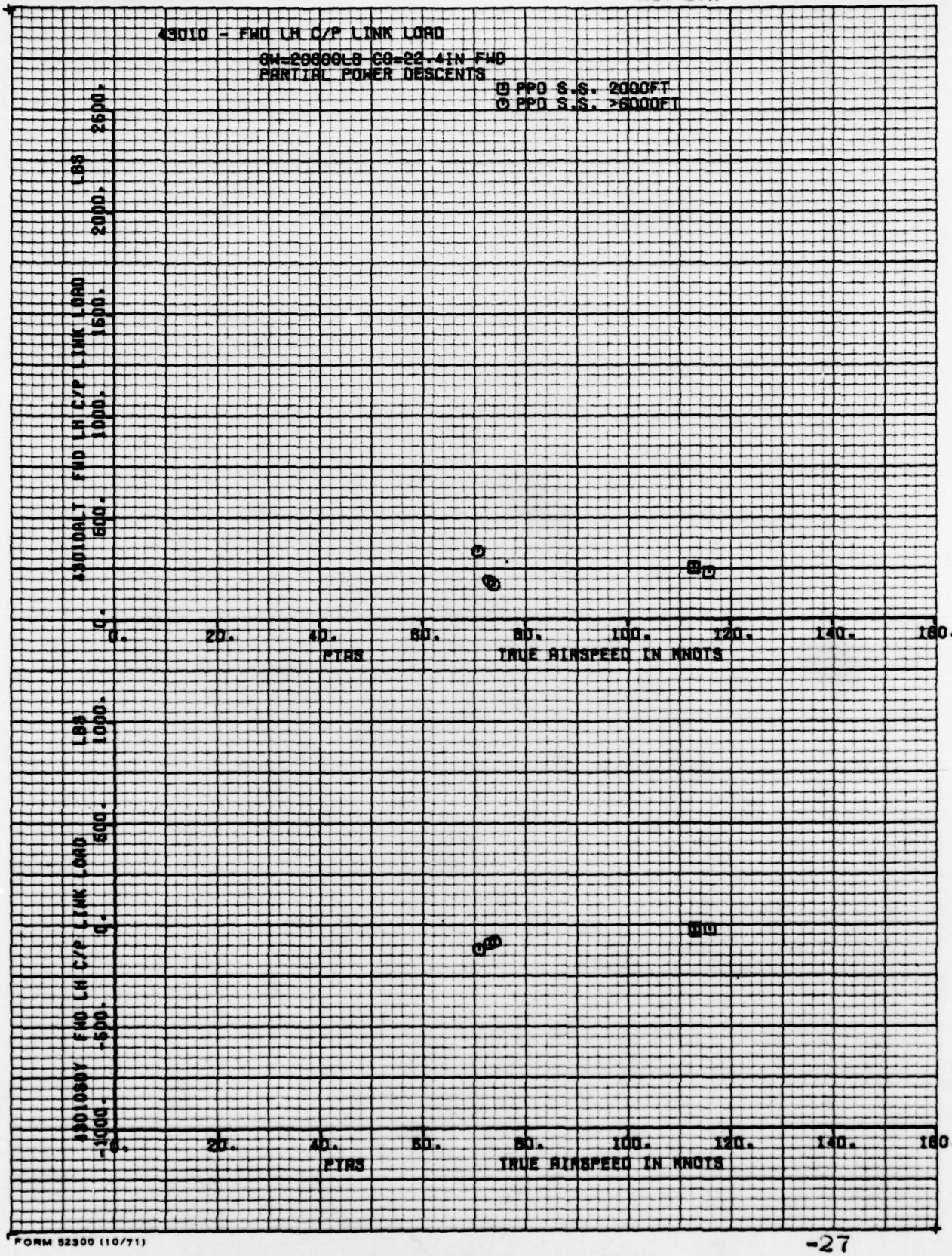
3 OF 4
AD A075615

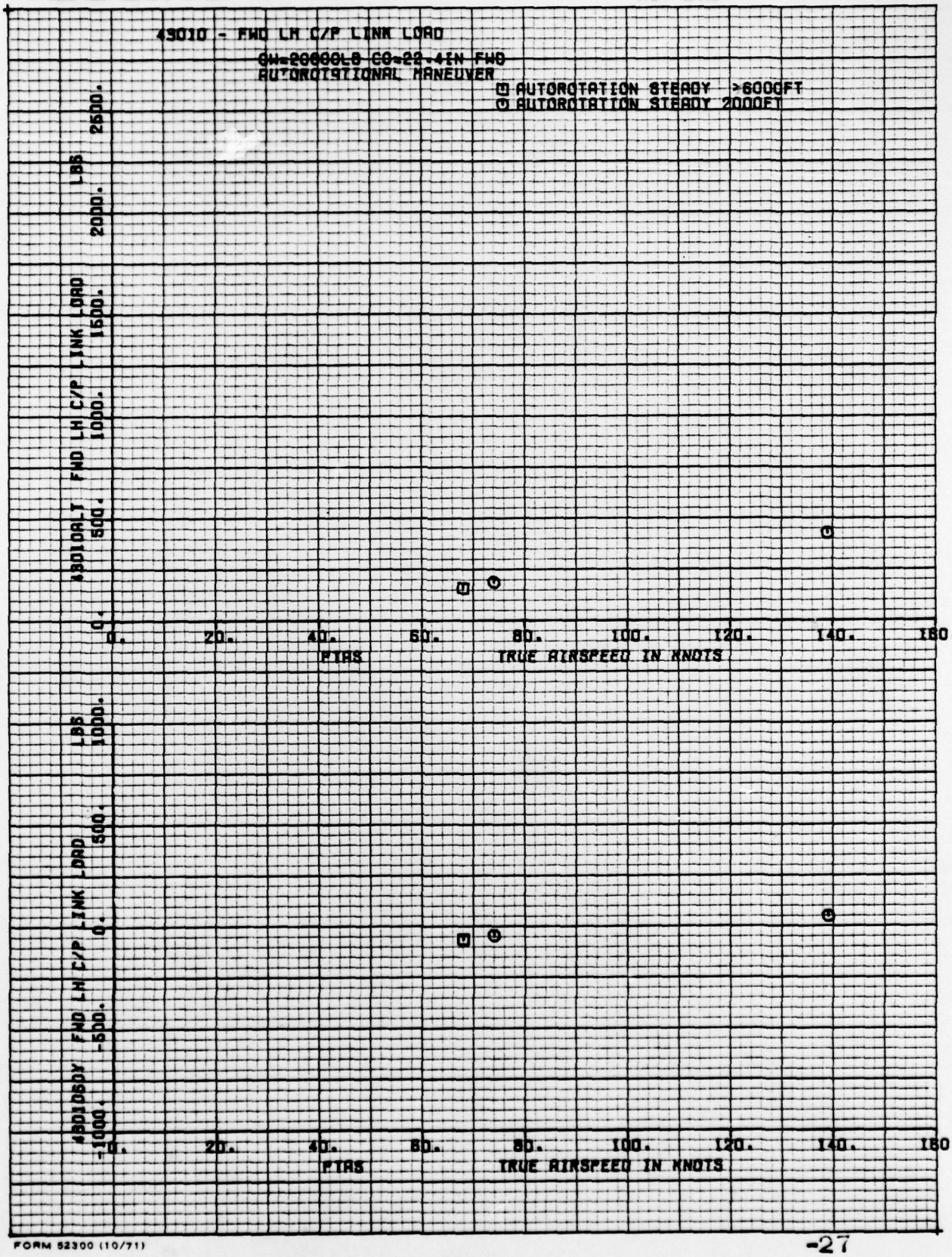



1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

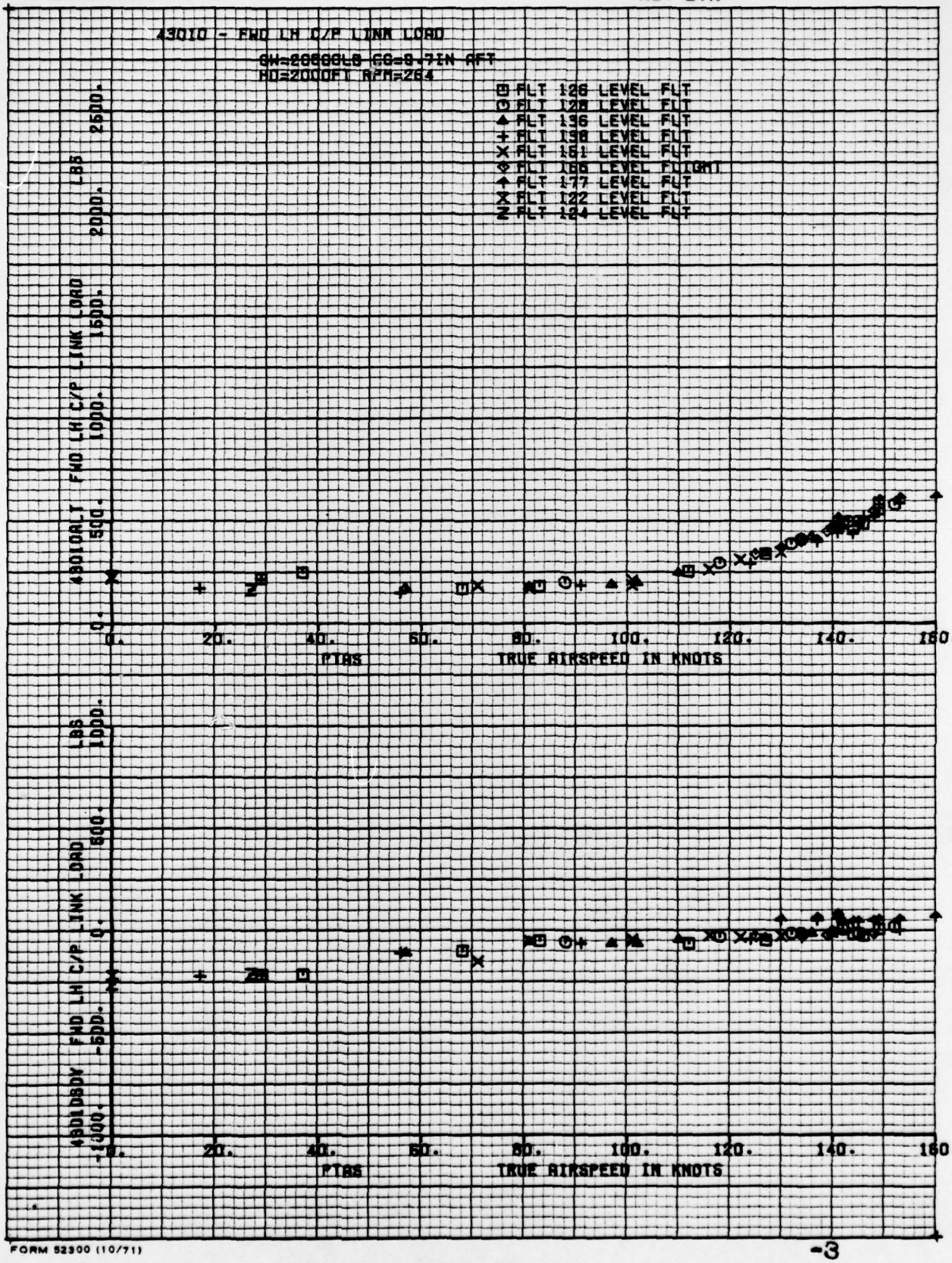

43010 - FWD LH C/P LINK LOAD
GW=20800LB CG=22.4IN FWD 264RPM
FLARE PWR ON
#3010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
#3010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


43010 - FWD LH C/P LINK LOAD
GW=20000LB CG=22.4IN FWD
POWER OFF 284RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >8000FT
LONG CONTROL REV >8000FT
DIR CONTROL REV >8000FT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
800.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43010LAT FWD LH C/P LINK LOAD LBS
1000.
800.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


43010 - FWD LH C/P LINK LOAD
GW=208000LB CG=22.4IN FWD
PARTIAL POWER DESCENTS
PPD S.S. 2000FT
PPD S.S. >6000FT
43010ALT FWD LH C/P LINK LOAD LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

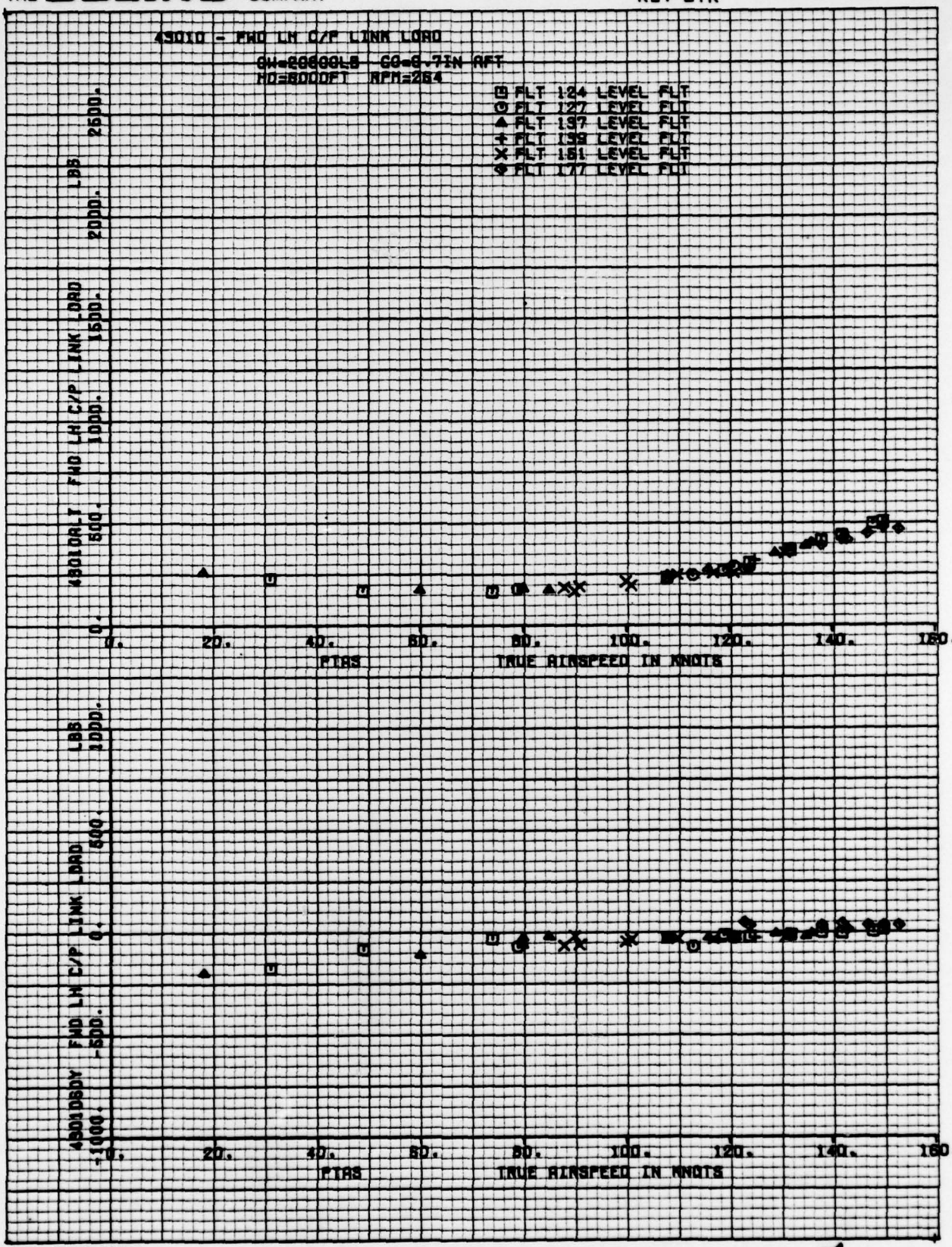

43010 - FWD LH C/P LINK LOAD
GW=20000LB CG=22.4IN FWD
AUTOROTATIONAL MANEUVER
AUTOROTATION STEADY >6000FT
AUTOROTATION STEADY 2000FT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS
43010DOY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



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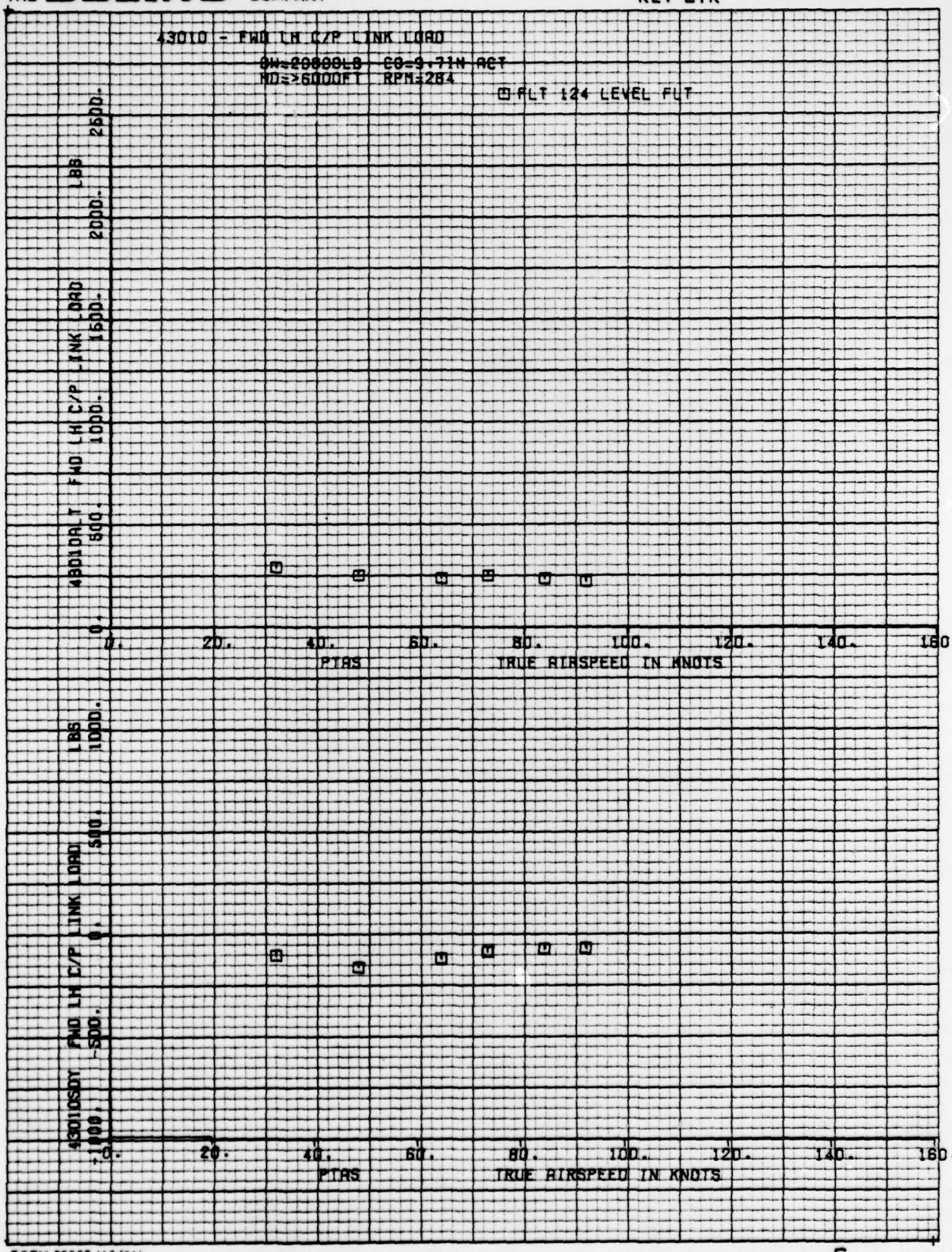
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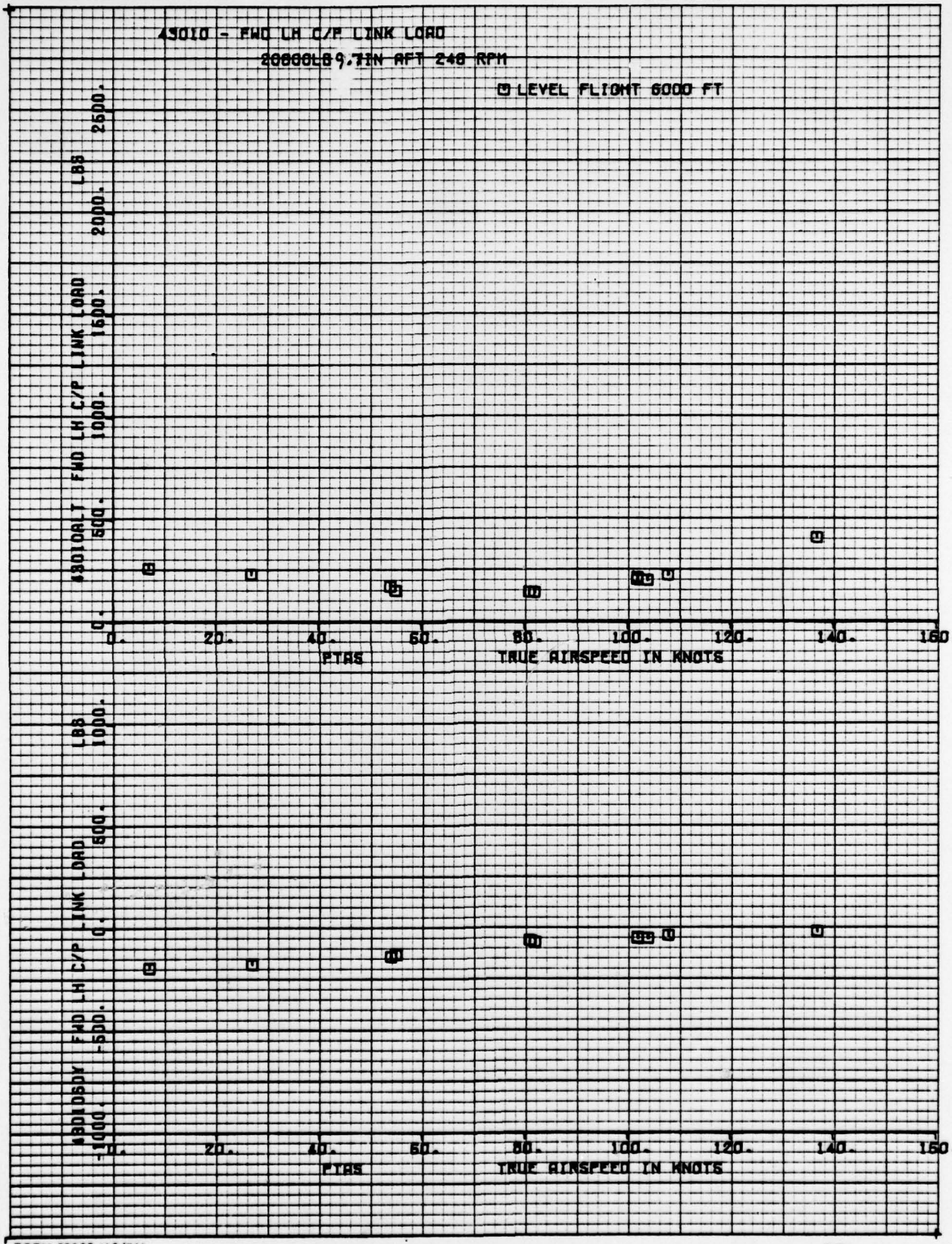
FORM 52300 (10/71)

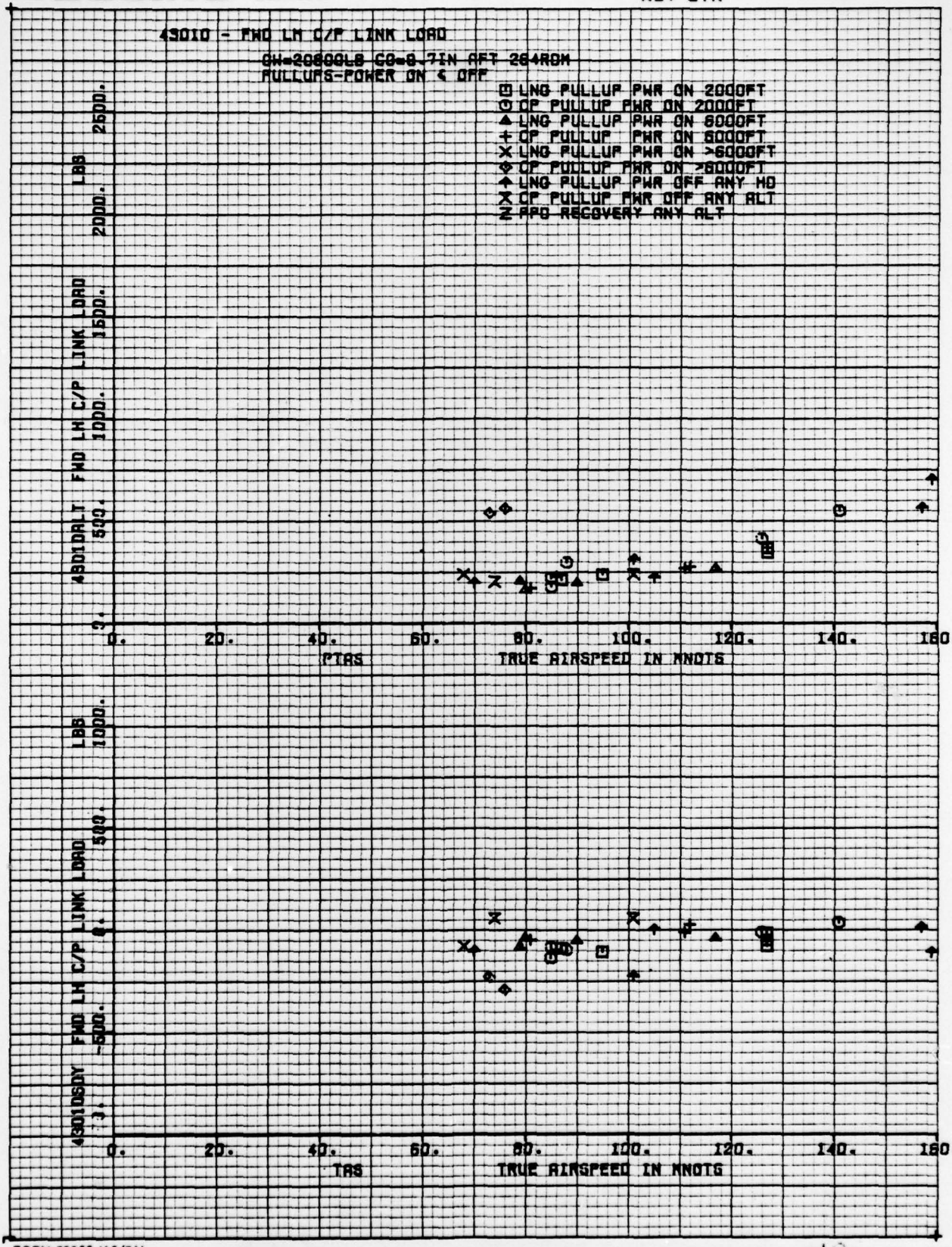
-4

SHEET 199


43010 - FWD LH C/P LINK LOAD
GW=208000LB CG=9.71IN ACT
MD=>60000FT RPM=284
FLT 124 LEVEL FLT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

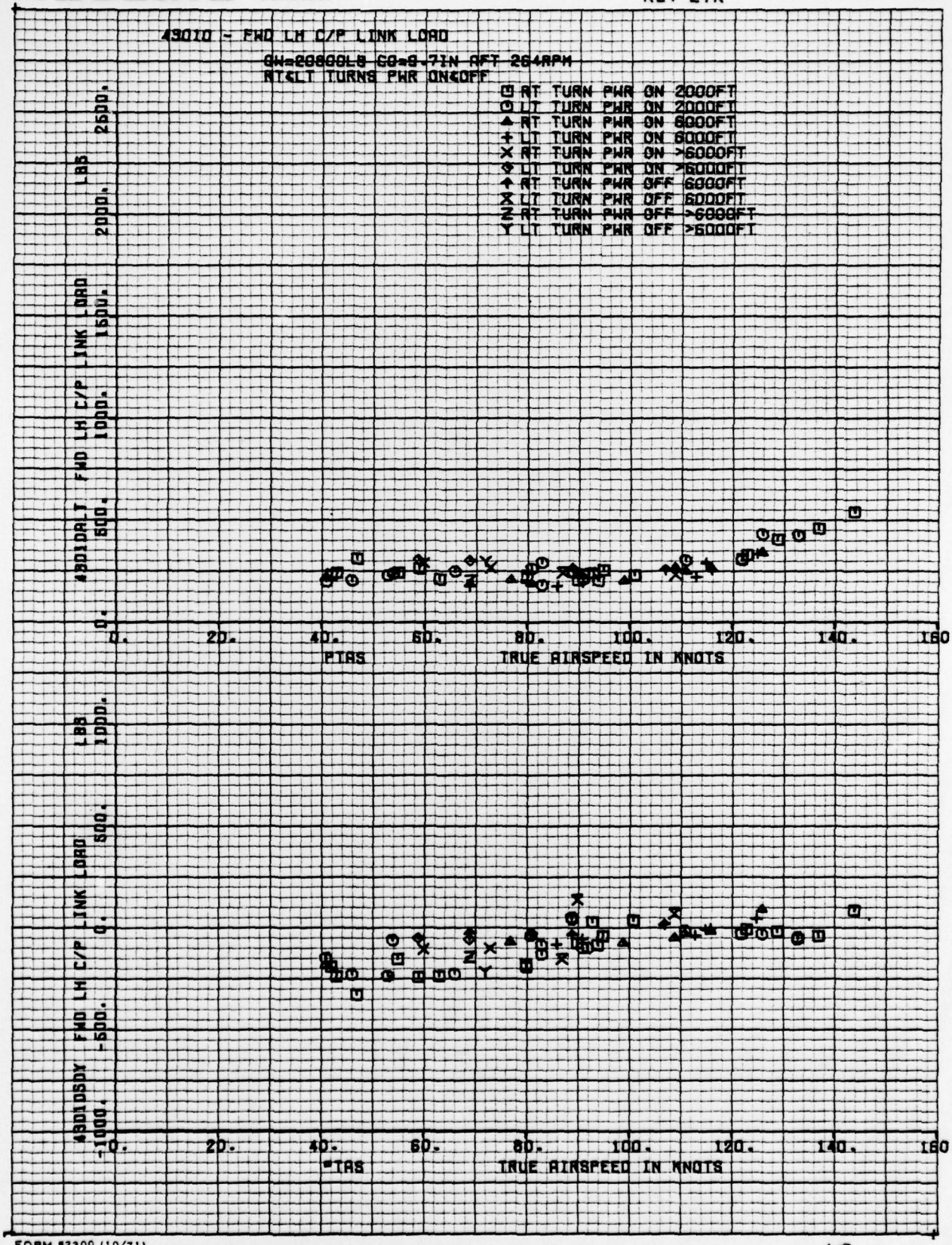
THE BOEING COMPANY

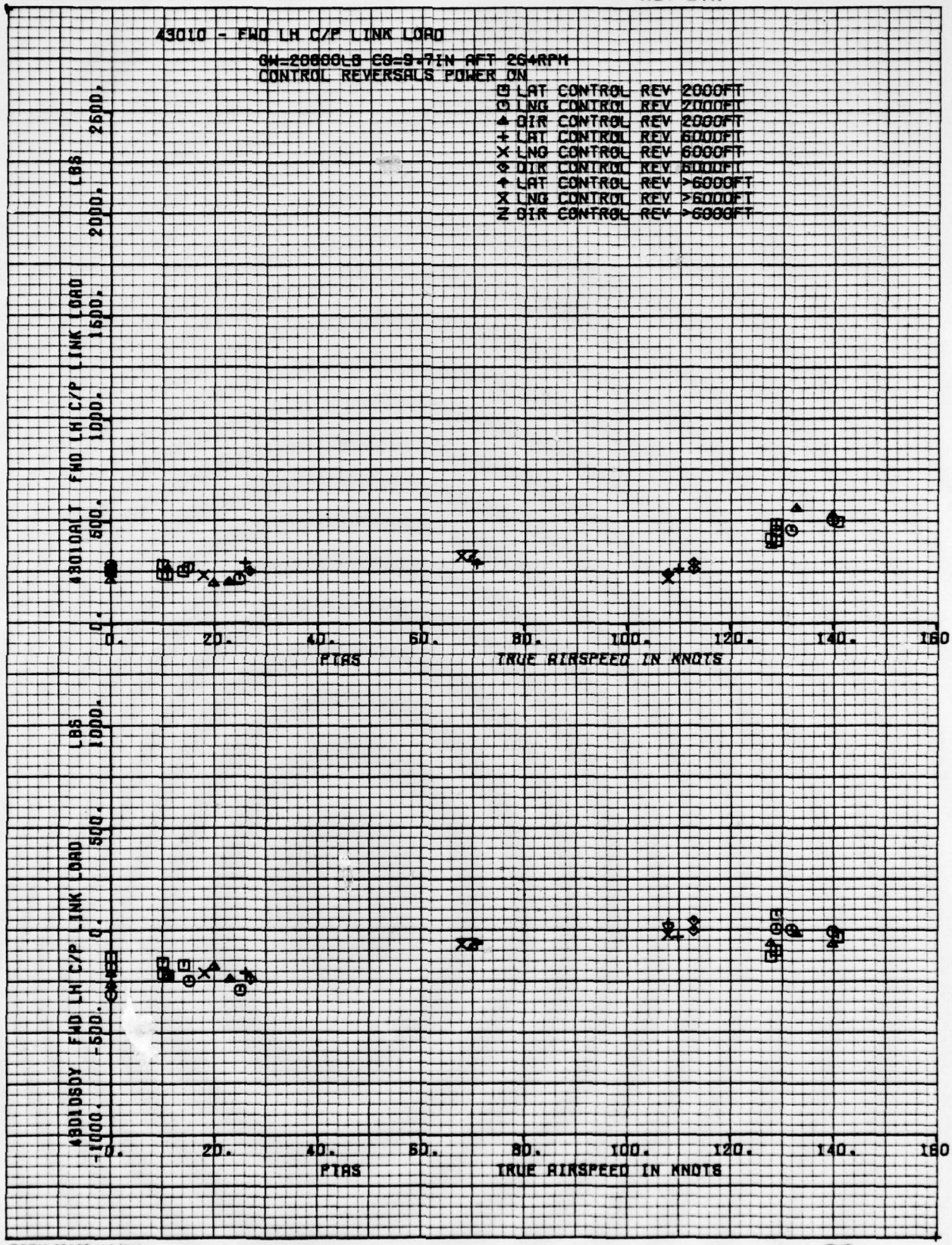


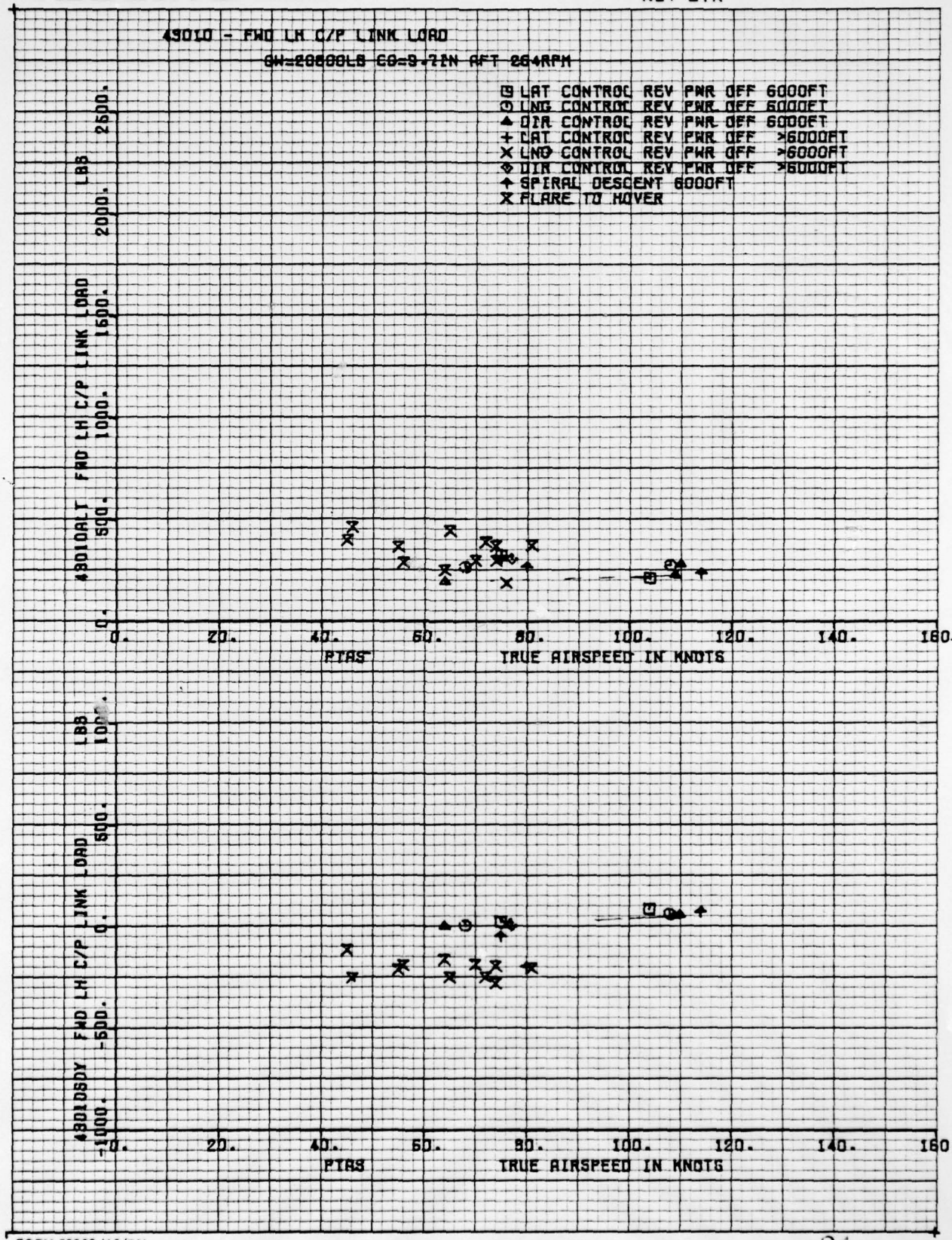


FORM 52300 (10/71)

SHEET 202

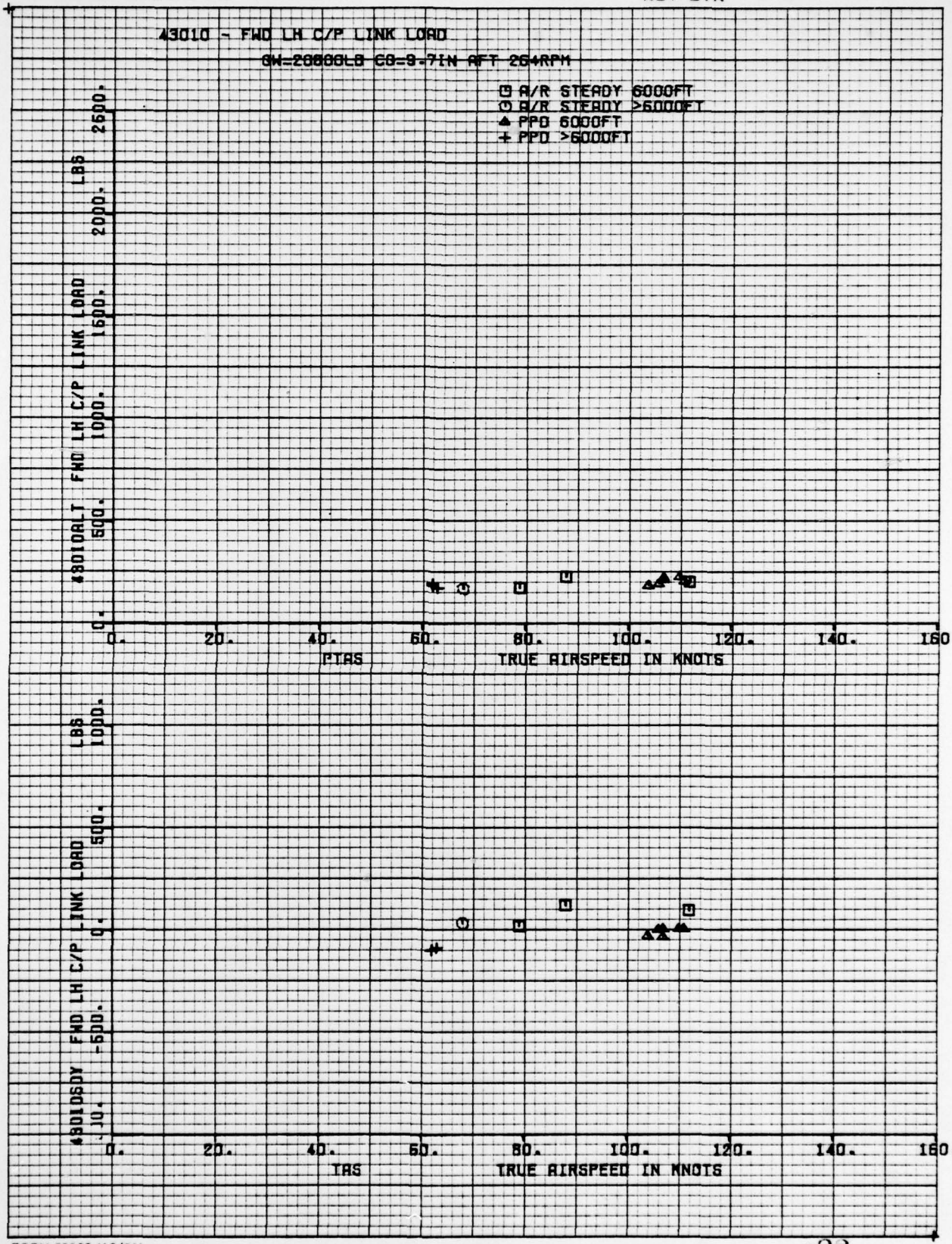

43010 - FWD LH C/P LINK LOAD
GW=20800LB CG=9.71IN AFT 264RPM
RT&LT TURNS PWR ON&OFF
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
RT TURN PWR ON 6000FT
LT TURN PWR ON 6000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF 6000FT
LT TURN PWR OFF 6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
43D1DALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43D1DSDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
*TAS
TRUE AIRSPEED IN KNOTS

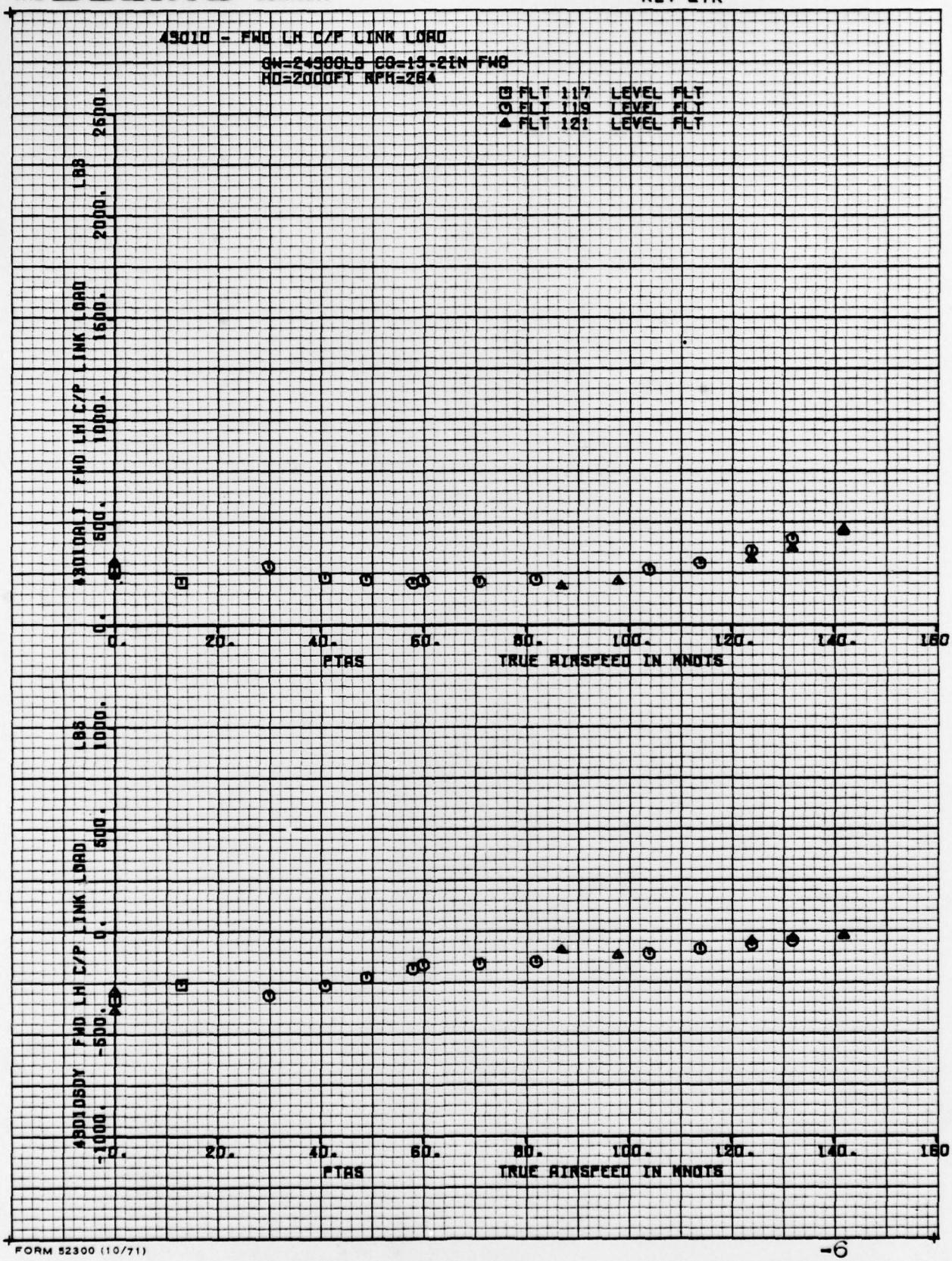

43010 - FWD LH C/P LINK LOAD
GW=20000LB CG=9.7IN AFT 264RPM
CONTROL REVERSALS POWER ON
LAT CONTROL REV 2000FT
LNG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LNG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LNG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
43010DSDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS

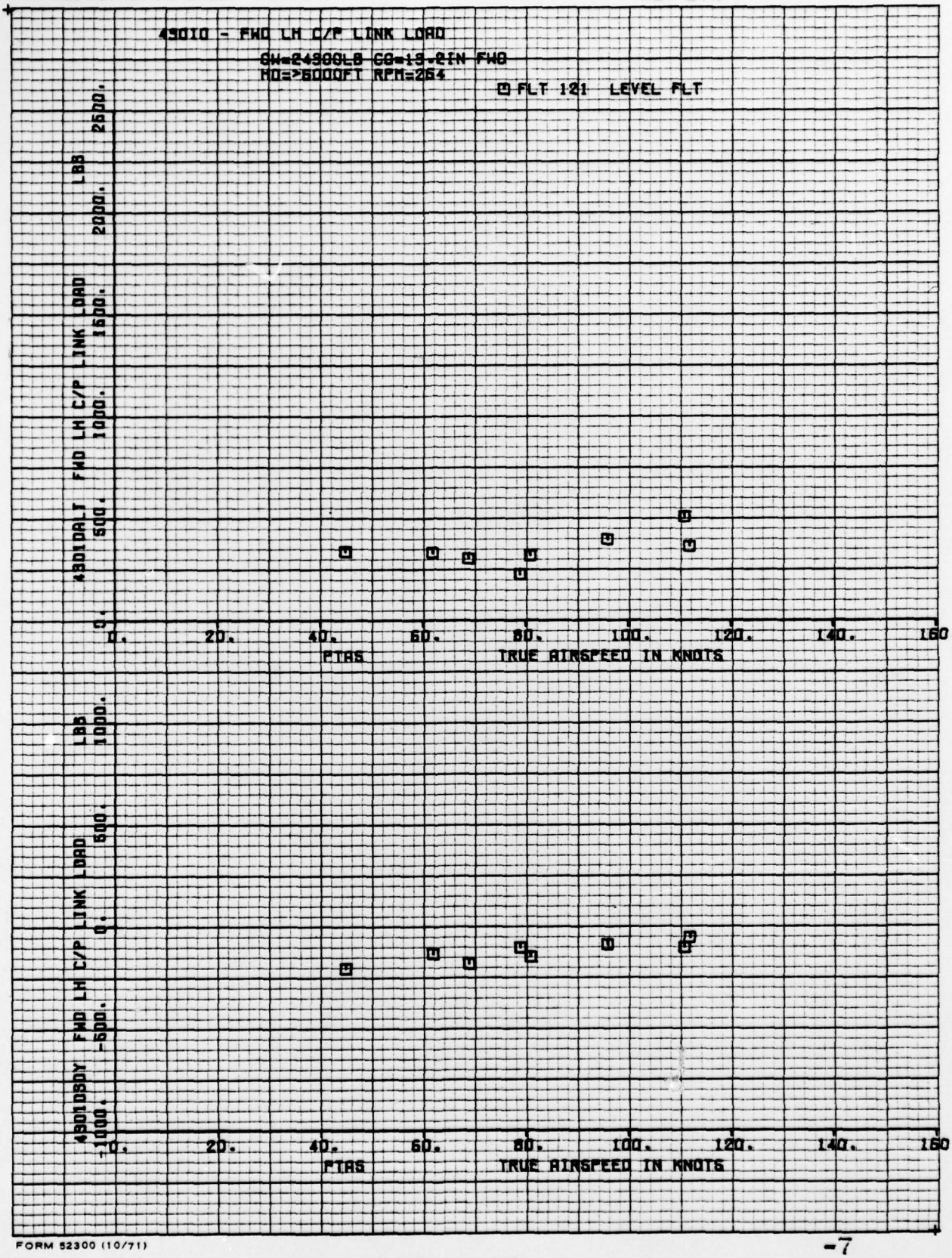


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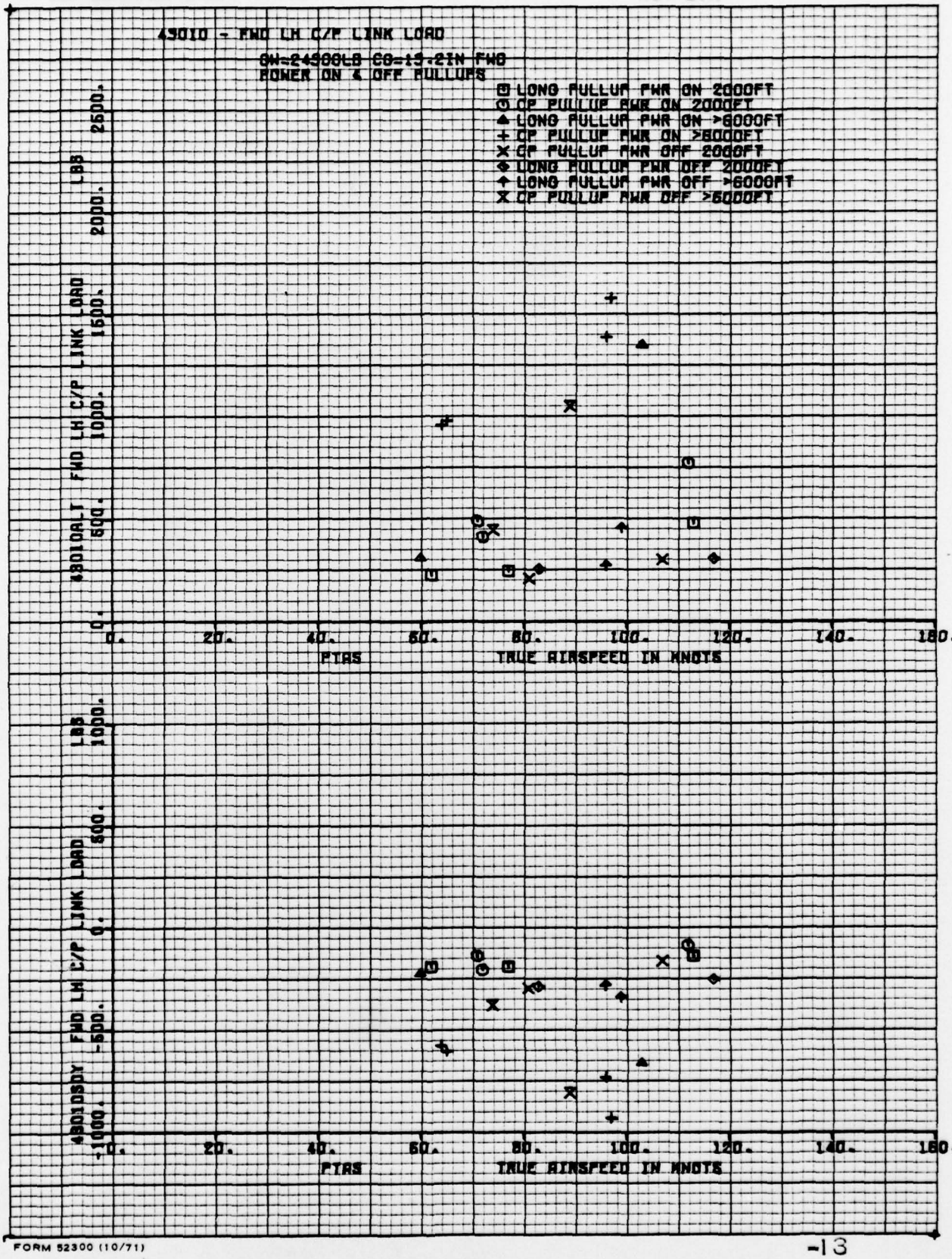
SHEET 205


43010 - FWD LH C/P LINK LOAD
GW=20000LB CG=9.7IN AFT 264RPM
A/R STEADY 6000FT
A/R STEADY >6000FT
PPD 6000FT
PPD >6000FT
43010ALT FWD LH C/P LINK LOAD LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43010DSDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-10.
0.
20.
40.
60.
80.
100.
120.
140.
160.
IAS
TRUE AIRSPEED IN KNOTS

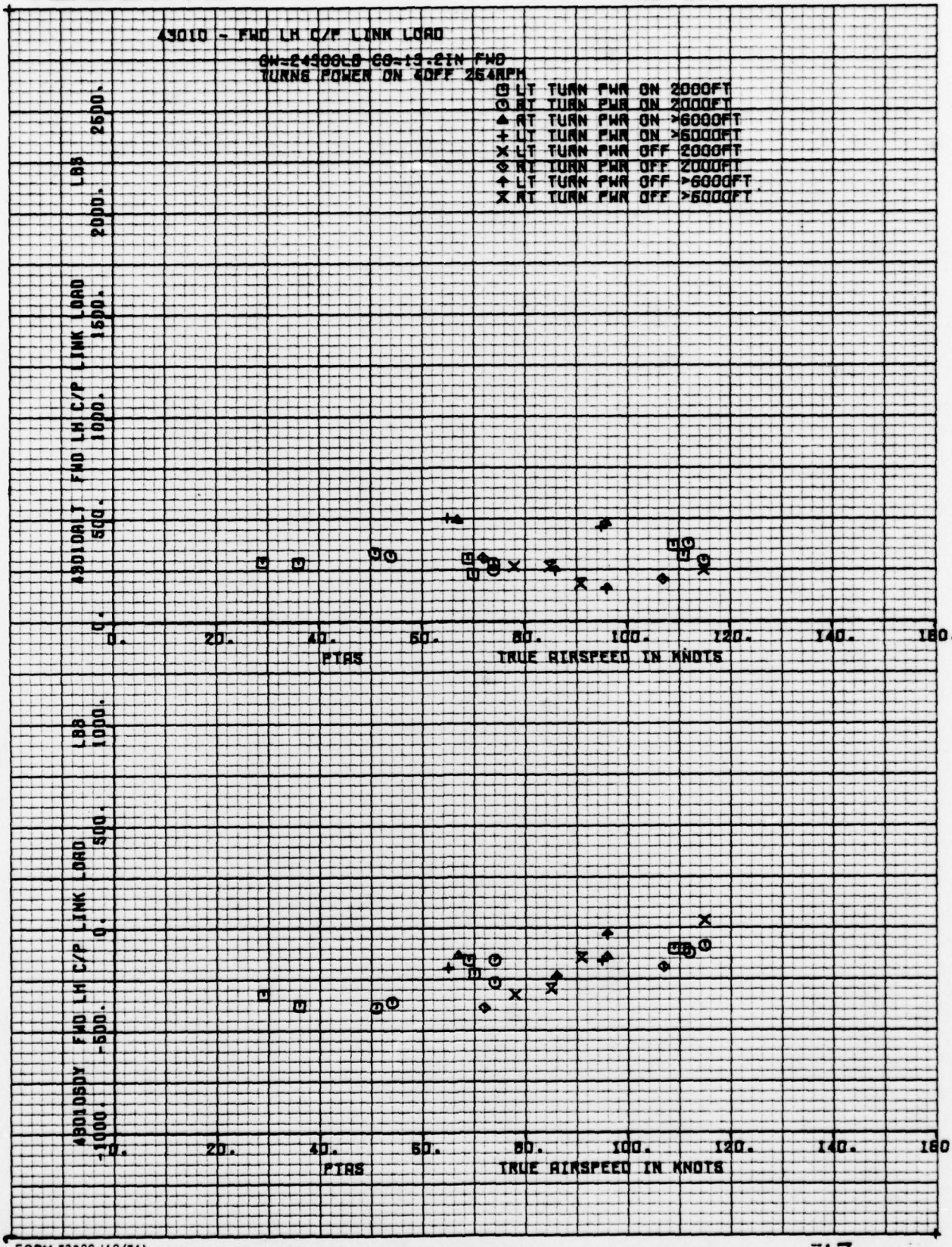

43010 - FWD LH C/P LINK LOAD
GW=24500LB CG=15.2IN FWD
HD=2000FT RPM=264
FLT 117 LEVEL FLT
FLT 119 LEVEL FLT
FLT 121 LEVEL FLT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS TRUE AIRSPEED IN KNOTS

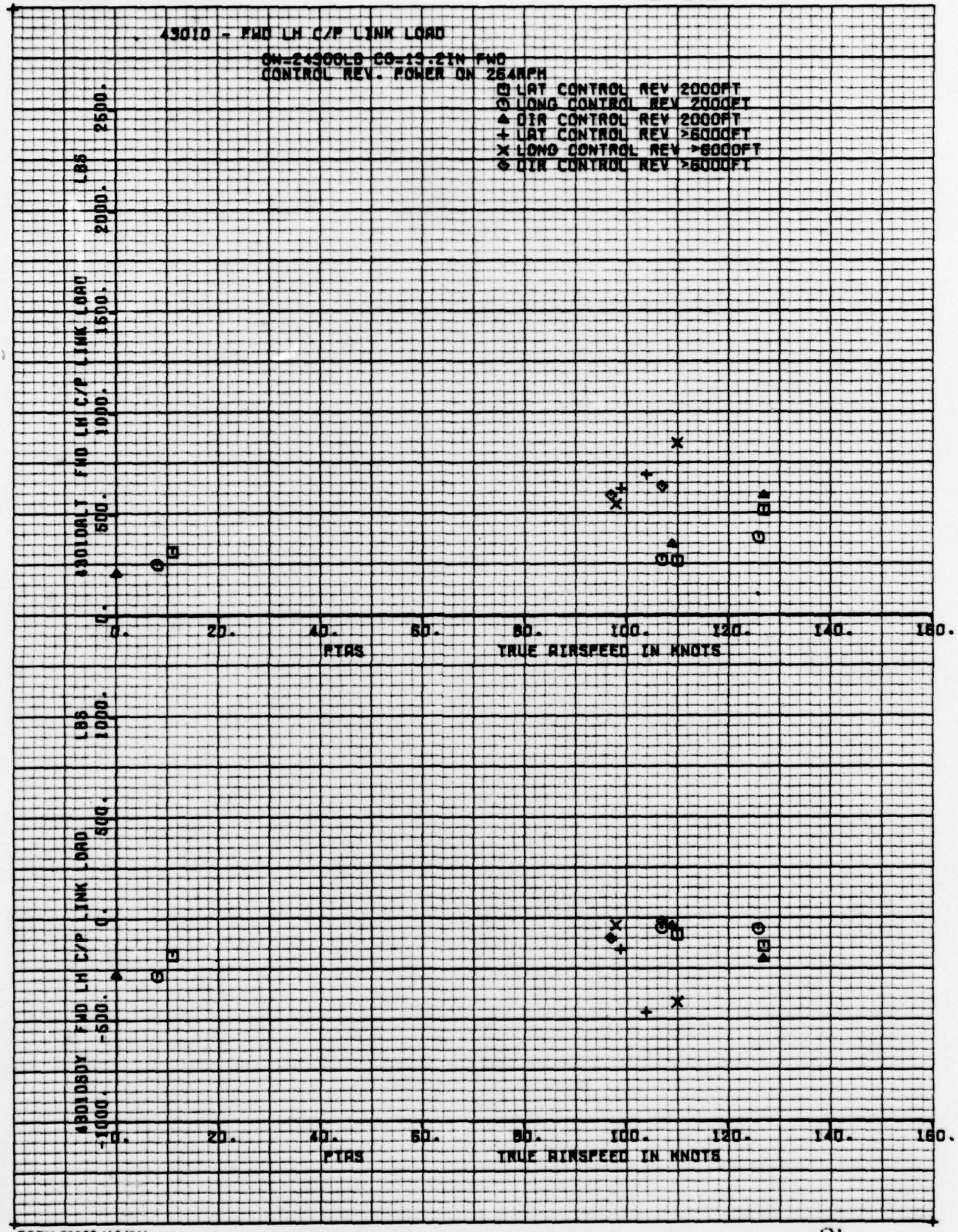

43010 - FWD LH C/P LINK LOAD
GW=24500LB CG=13.2IN FWD
HO=>6000FT RPM=264
FLT 121 LEVEL FLT
43010ALF FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43010BDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

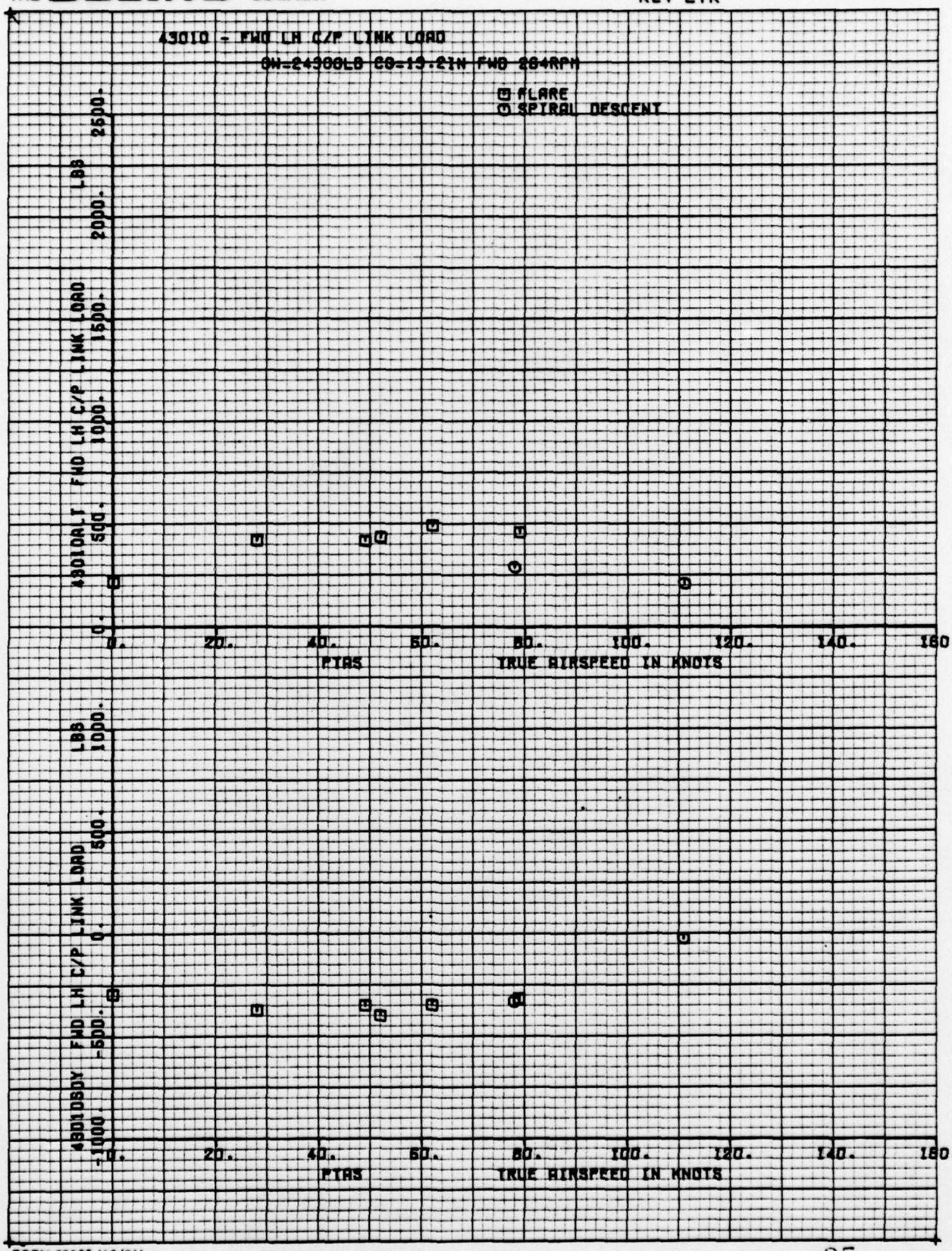
THE BOEING COMPANY

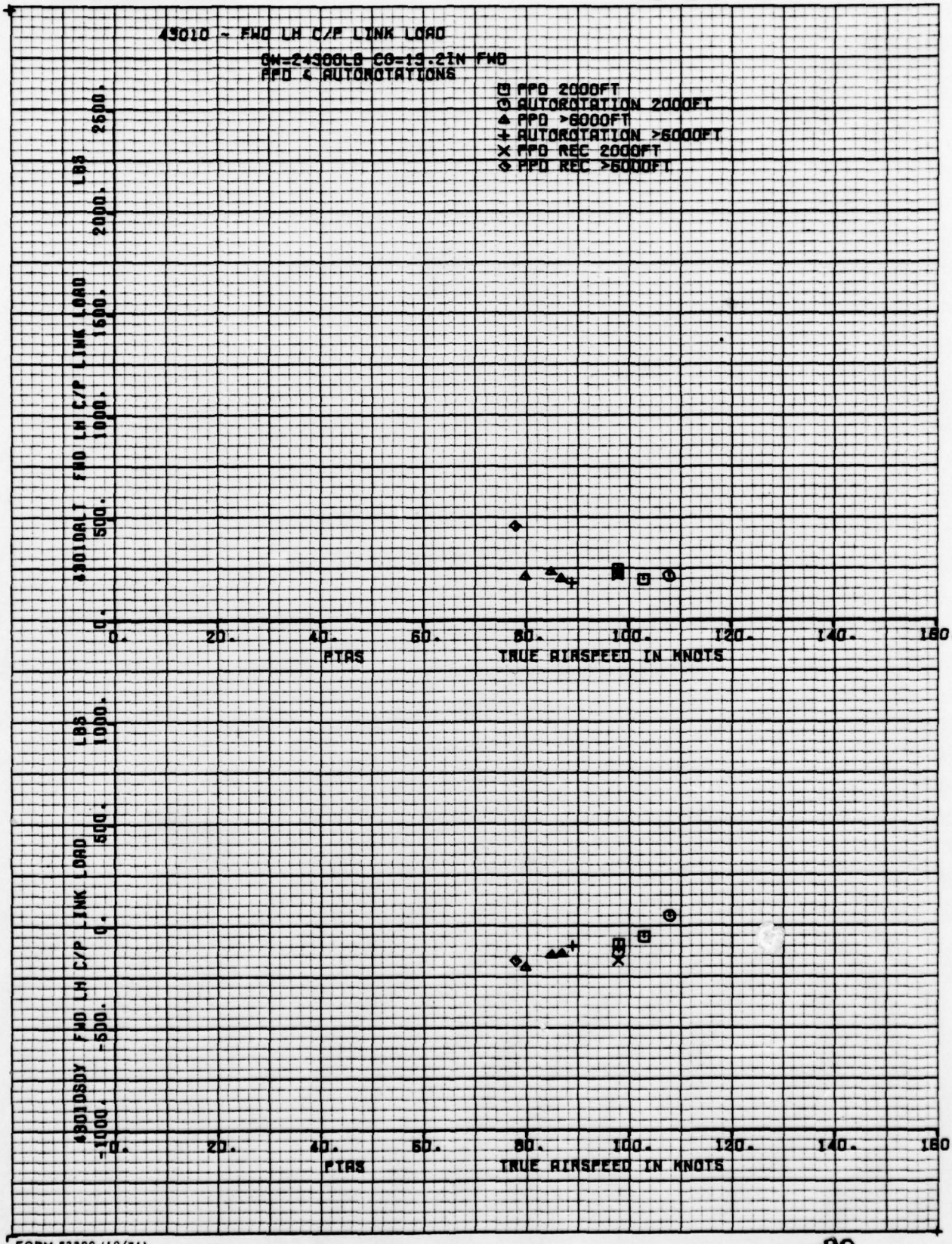


FORM 52300 (10/71)

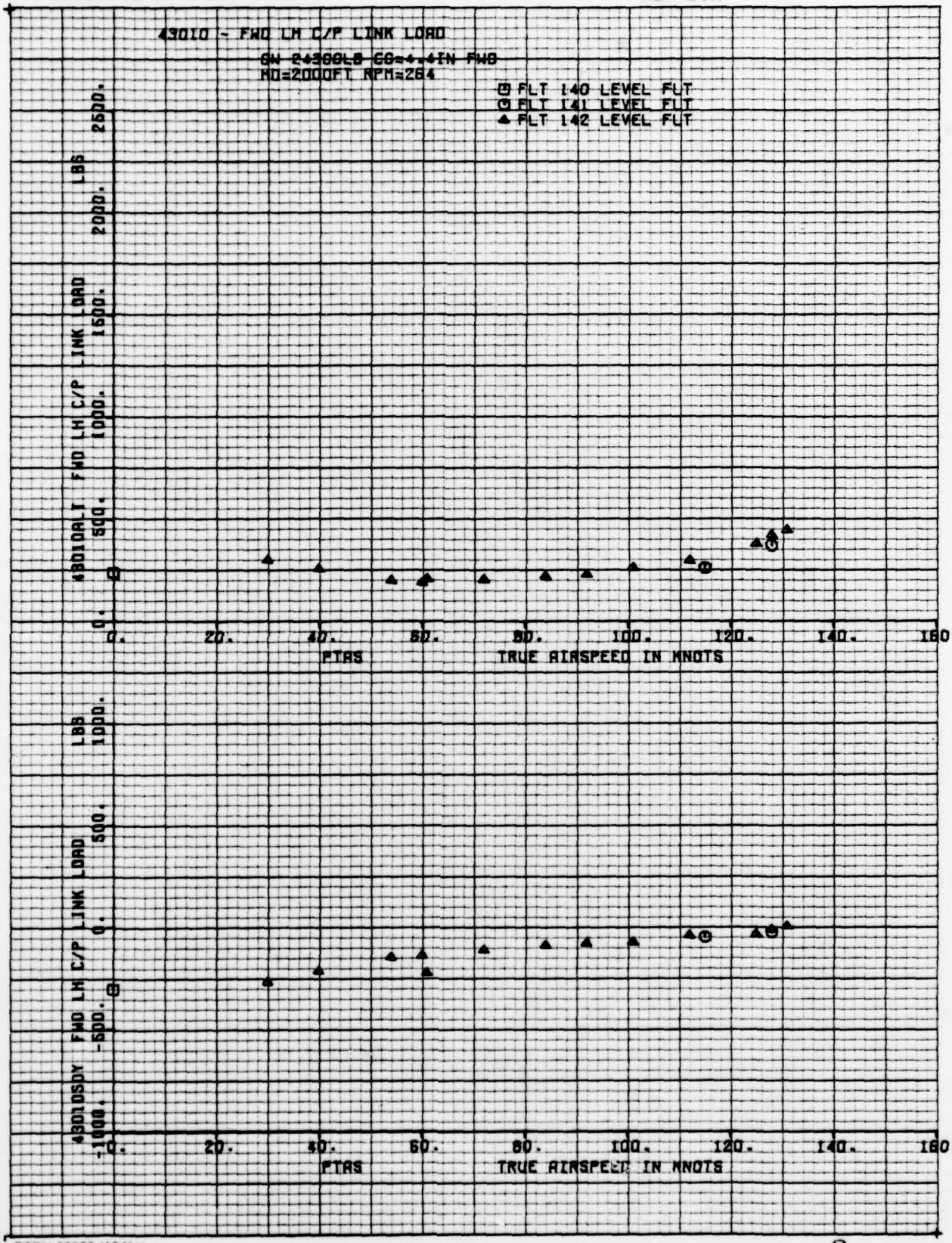

43010 - FWD LH C/P LINK LOAD
GW=24300LB CG=19.2IN FWD
TURNS POWER ON &OFF 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
LT TURN PWR OFF >6000FT
RT TURN PWR OFF >6000FT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS


43010 - FWD LH C/P LINK LOAD
GW=24300LB CG=19.2IN FWD
CONTROL REV. POWER ON 264RPH
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS


43010 - FWD LH C/P LINK LOAD
GW=24300LB CG=19.2IN FWD 284RPH
FLARE
SPIRAL DESCENT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
43010BDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

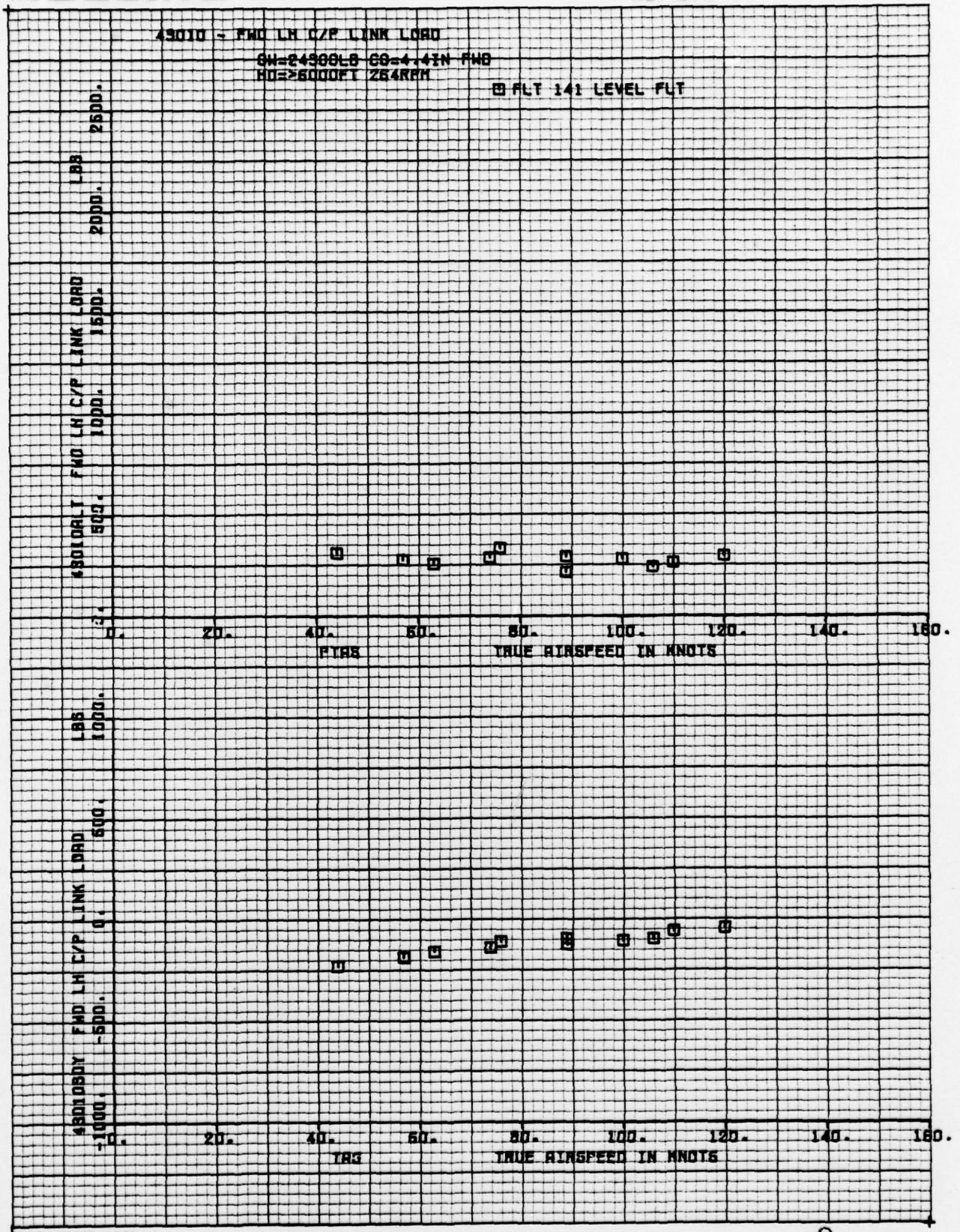

43010 - FWD LH C/P LINK LOAD
GW=24300LB CG=19.2IN FWD
RPD & AUTOROTATIONS
RPD 2000FT
AUTOROTATION 2000FT
RPD >6000FT
AUTOROTATION >6000FT
RPD REC 2000FT
RPD REC >6000FT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43010DSDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

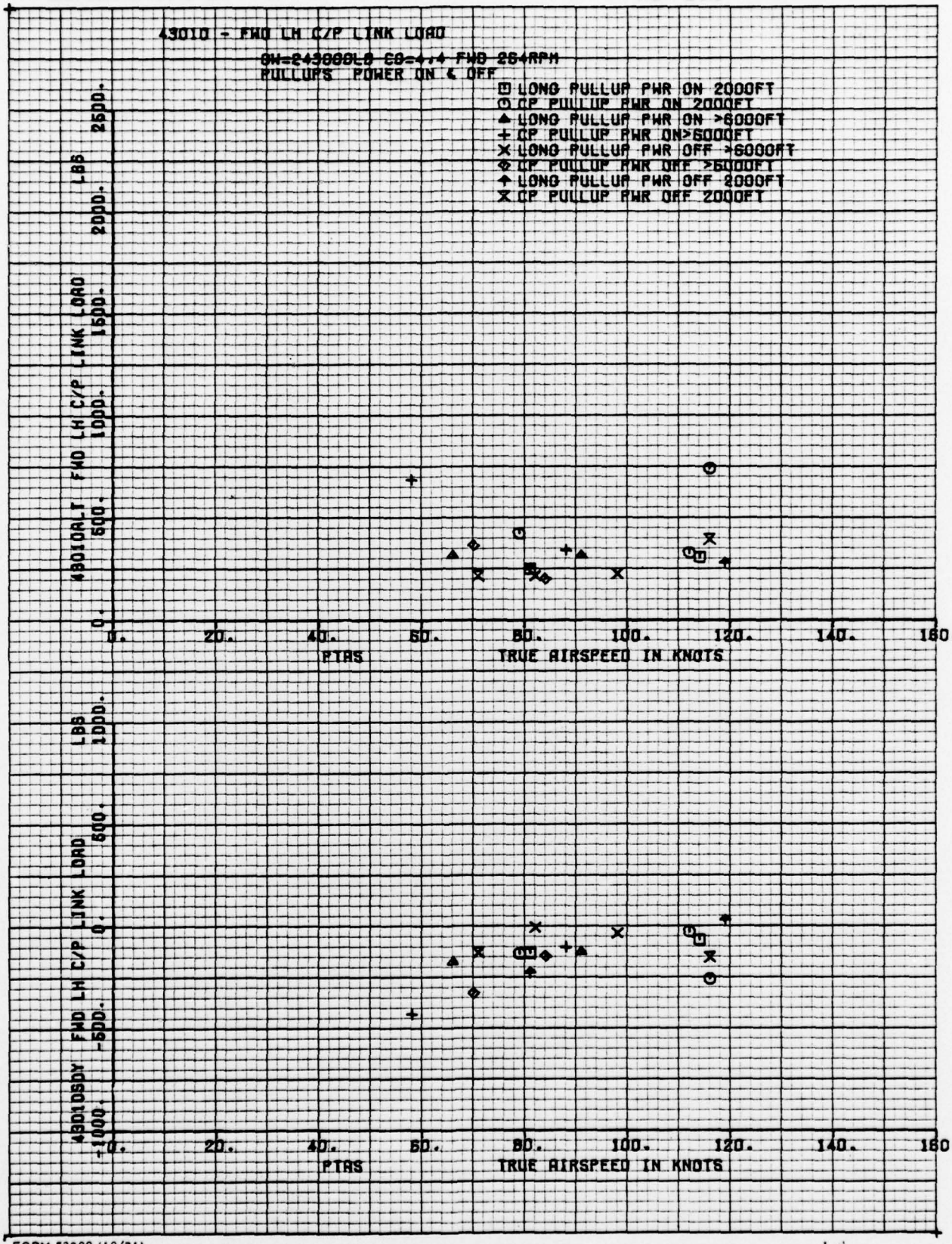


FORM 52300 (10/71)

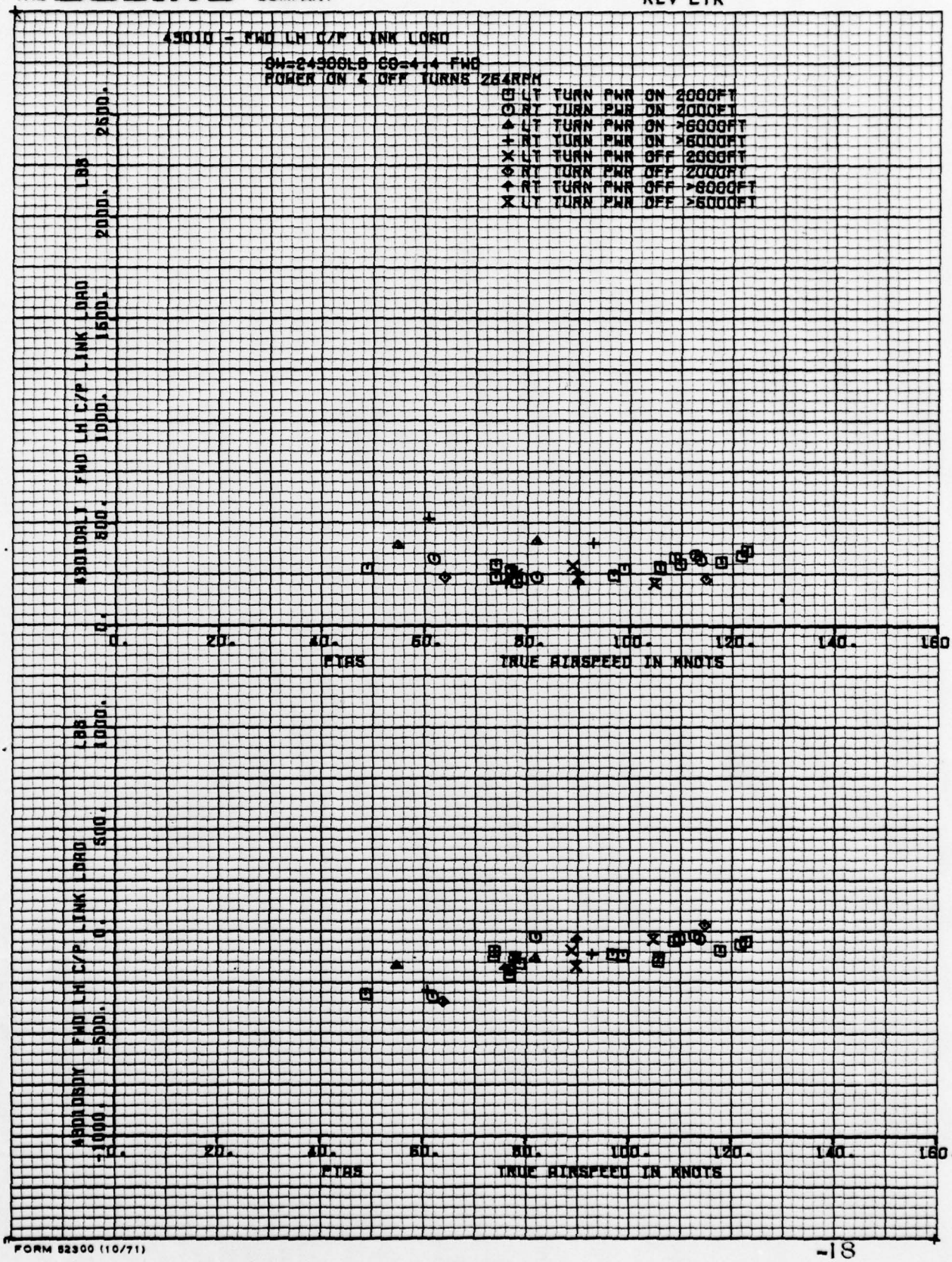
THE BOEING COMPANY



FORM 52300 (10/71)

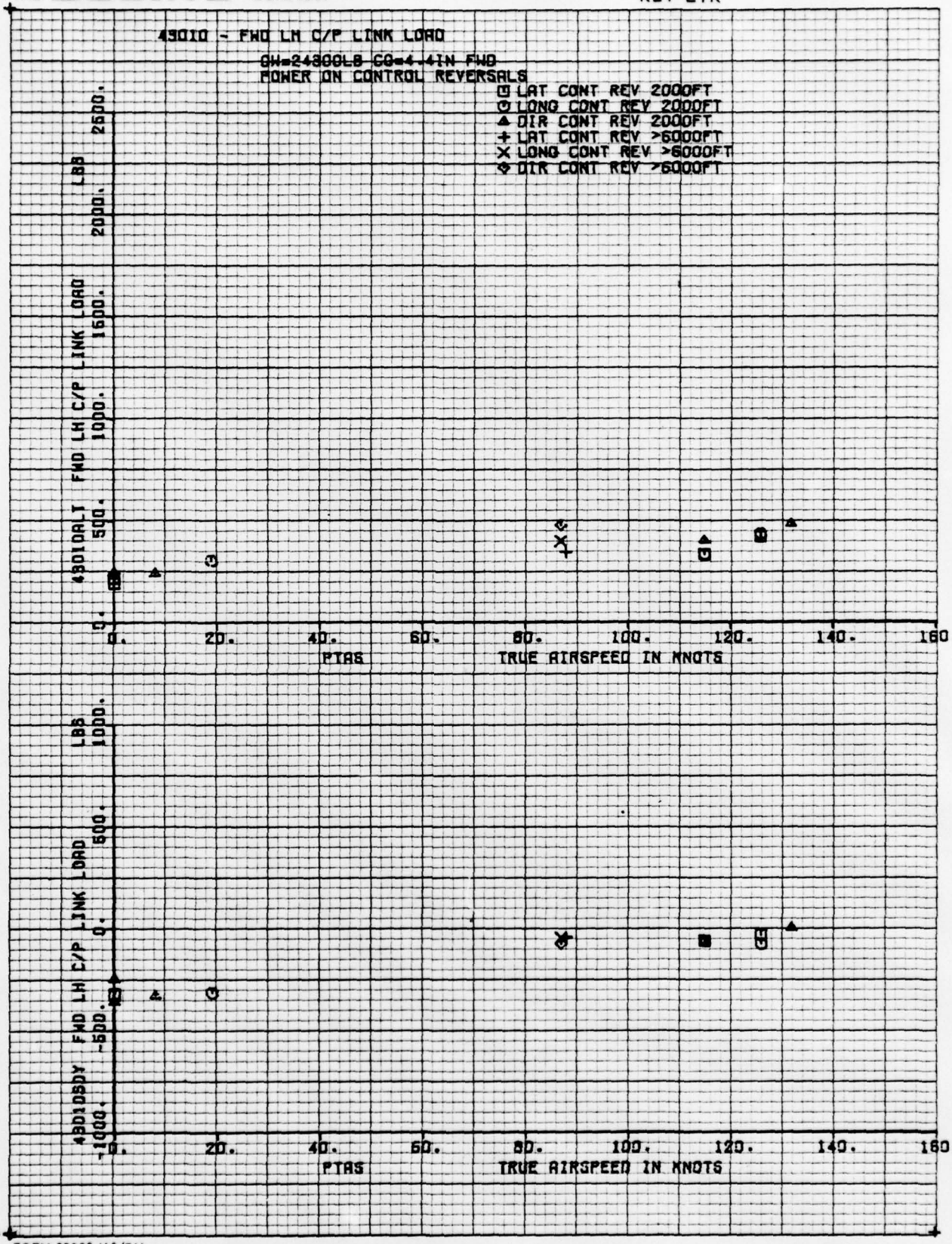

43010 - FWD LH C/P LINK LOAD
GW=243000LB CG=4.4 FWD 254RPM
PULLUPS POWER ON & OFF
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON>6000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
LONG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
43010ALF FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

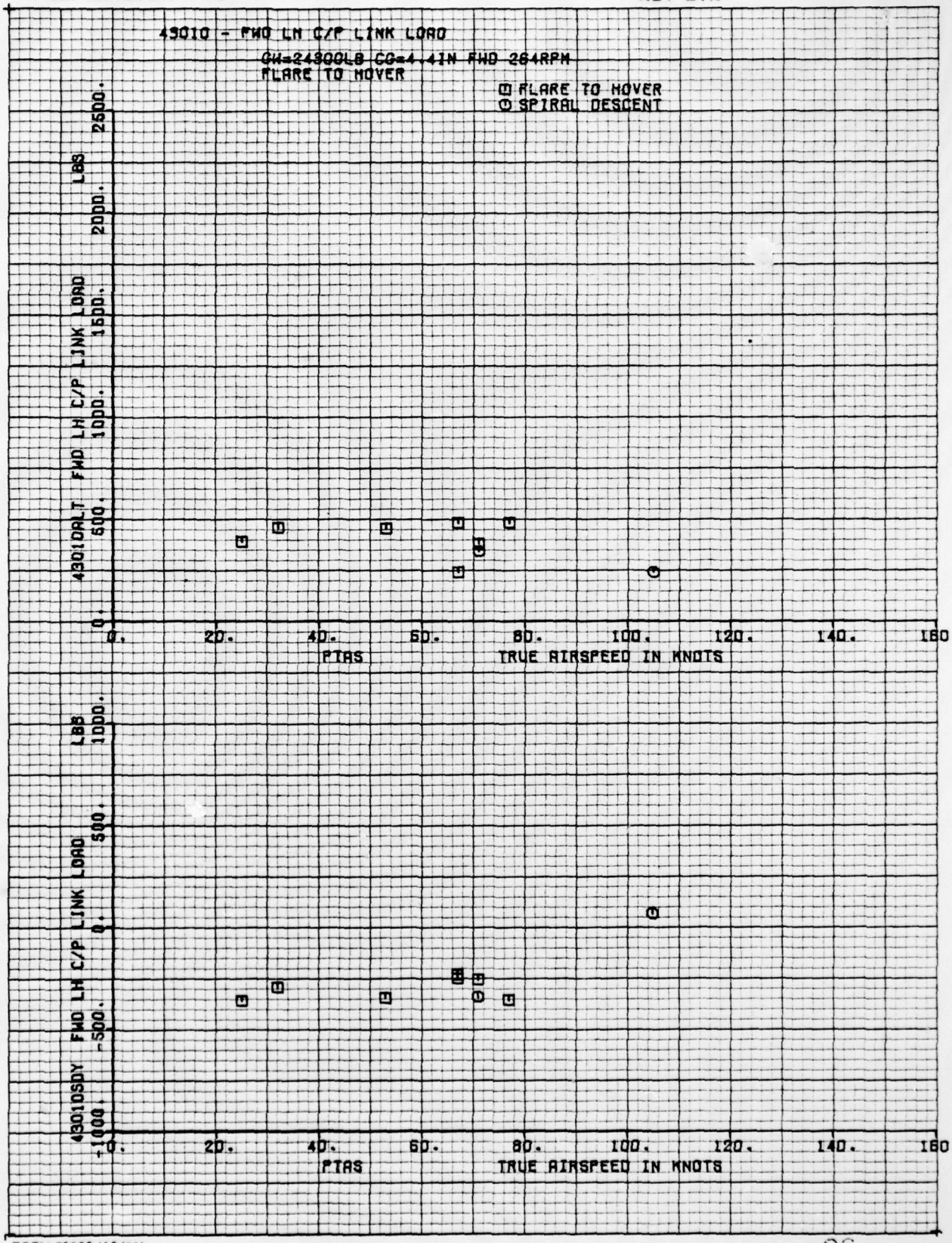


FORM 52300 (10/71)

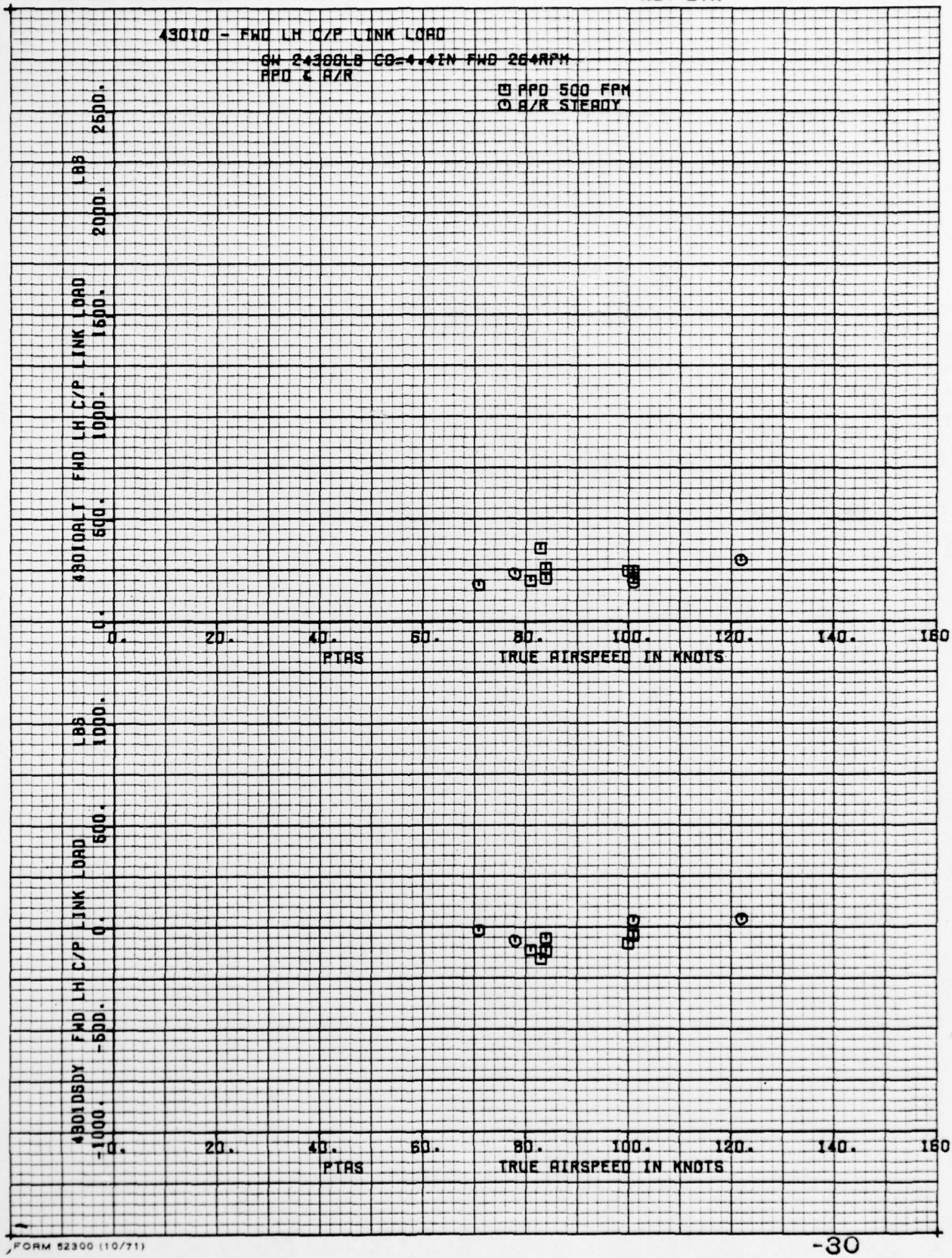
THE BOEING COMPANY

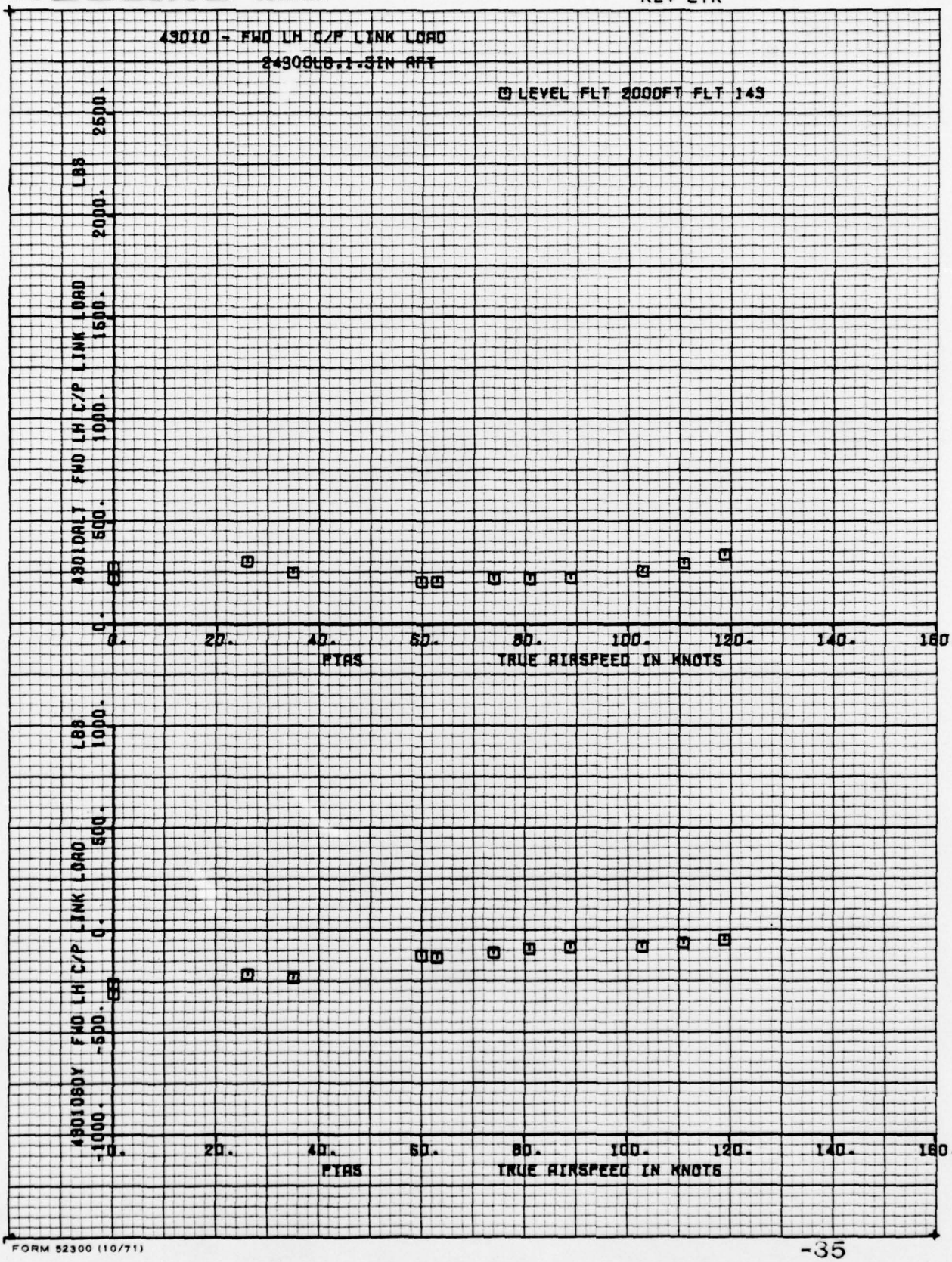


FORM 52300 (10/71)

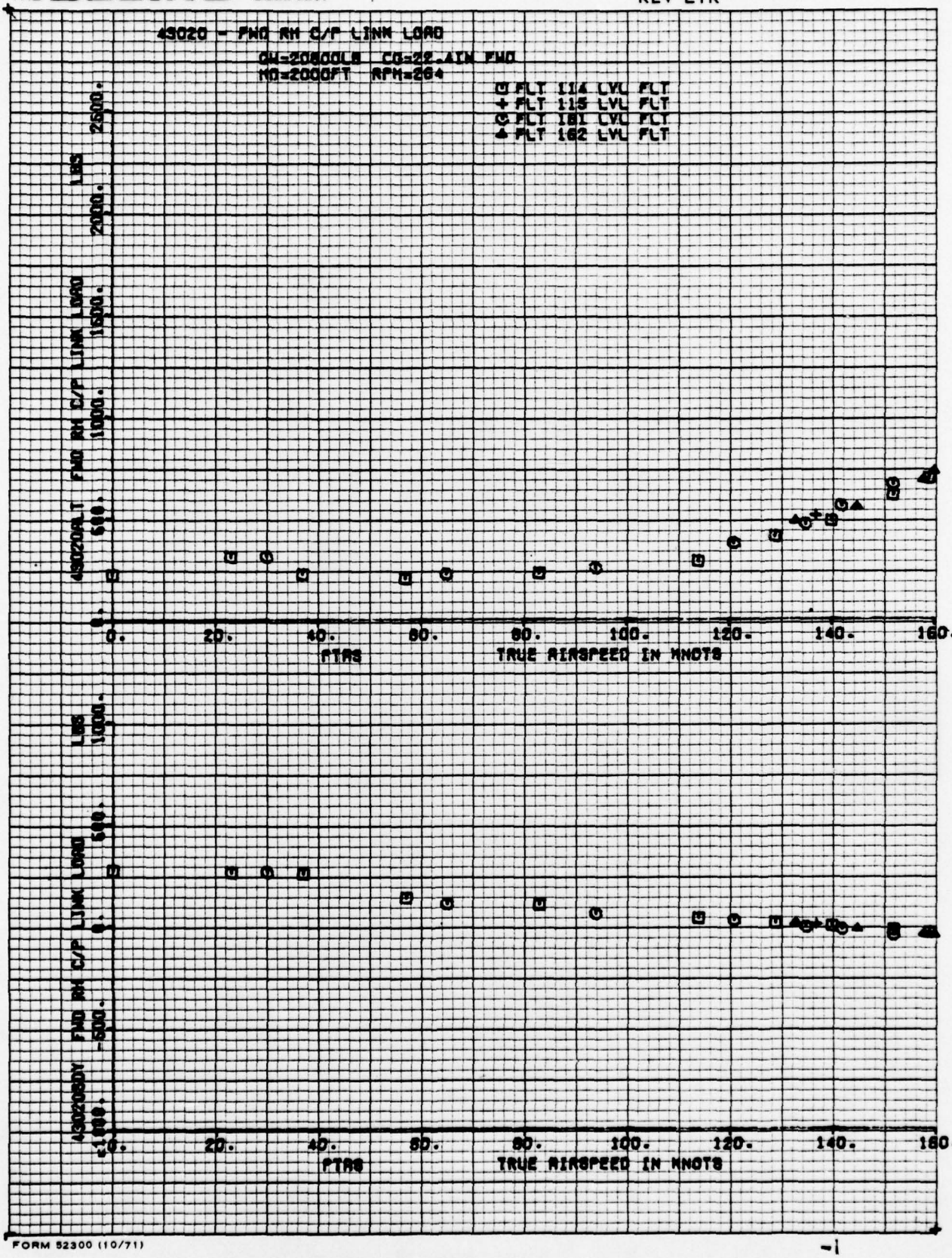

43010 - FWD LH C/P LINK LOAD
GW=24300LB CG=4.41N FWD 264RPM
FLARE TO HOVER
FLARE TO HOVER
SPIRAL DESCENT
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43010SDY FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

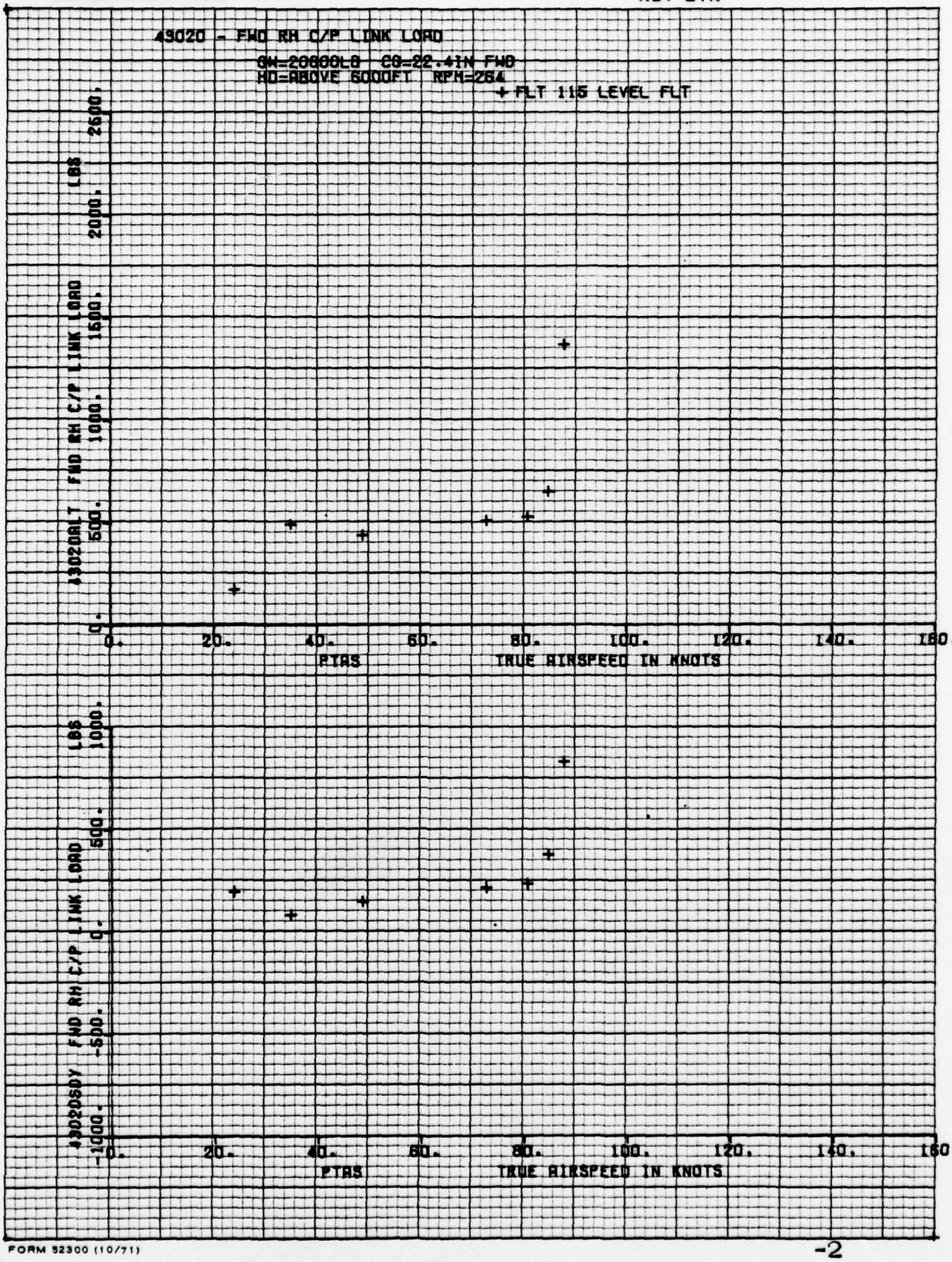



43010 - FWD LH C/P LINK LOAD
2430GLB.1.SIN AFT
LEVEL FLT 2000FT FLT 143
43010ALT FWD LH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS
43010SDV FWD LH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS

4.7 Forward R.H. C/P Link


43020 - FWD RH C/P LINK LOAD
GW=208000LB CG=22.4IN FWD
HO=2000FT RPM=264
FLT 114 LVL FLT
+ FLT 115 LVL FLT
FLT 181 LVL FLT
FLT 182 LVL FLT
43020ALT FWD RH C/P LINK LOAD LBS
2600.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
LBS
1000.
500.
0.
-500.
-1000.
43020SDY FWD RH C/P LINK LOAD
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

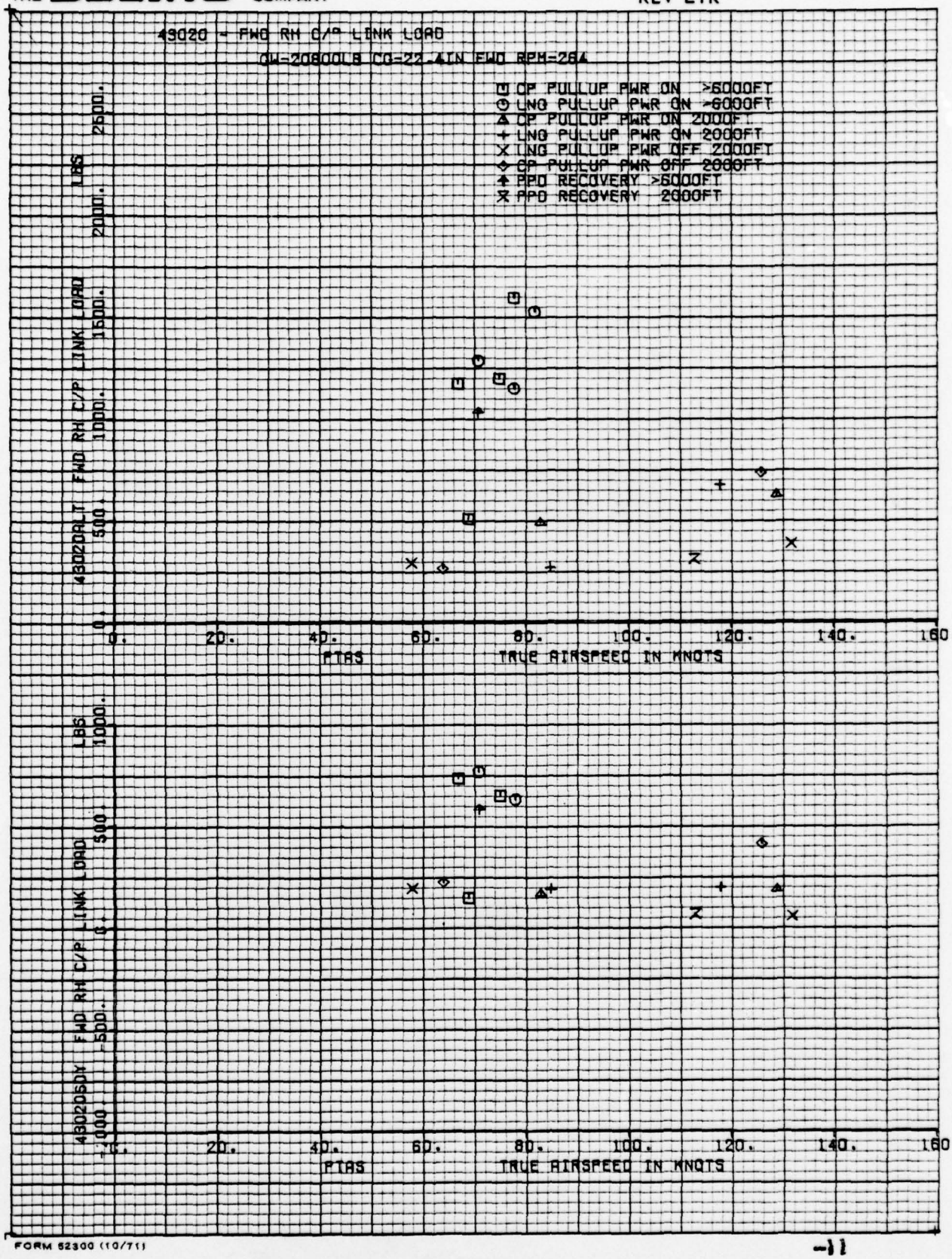


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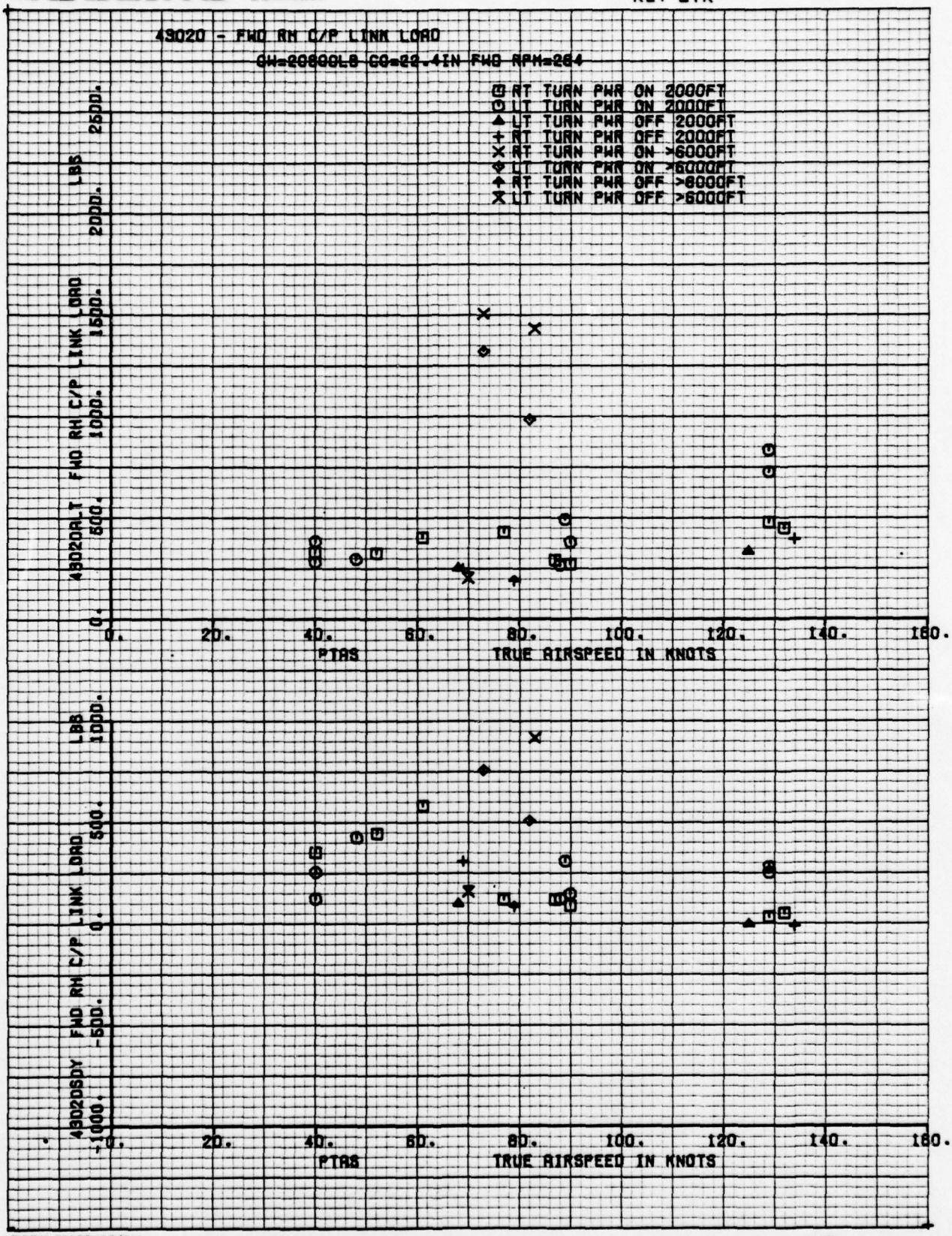
SHEET 224

THE BOEING COMPANY



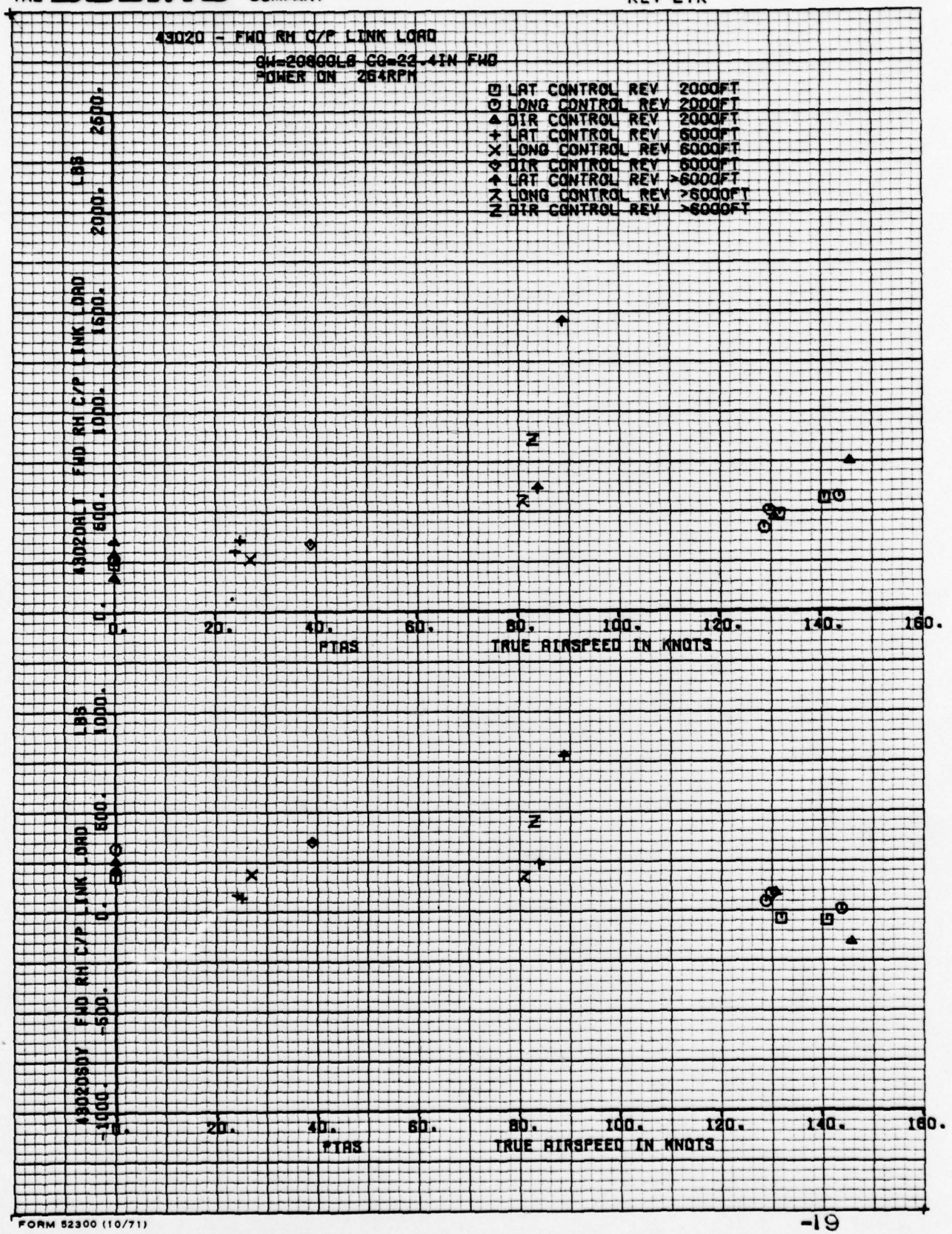
FORM 52300 (10/71)

THE BOEING COMPANY

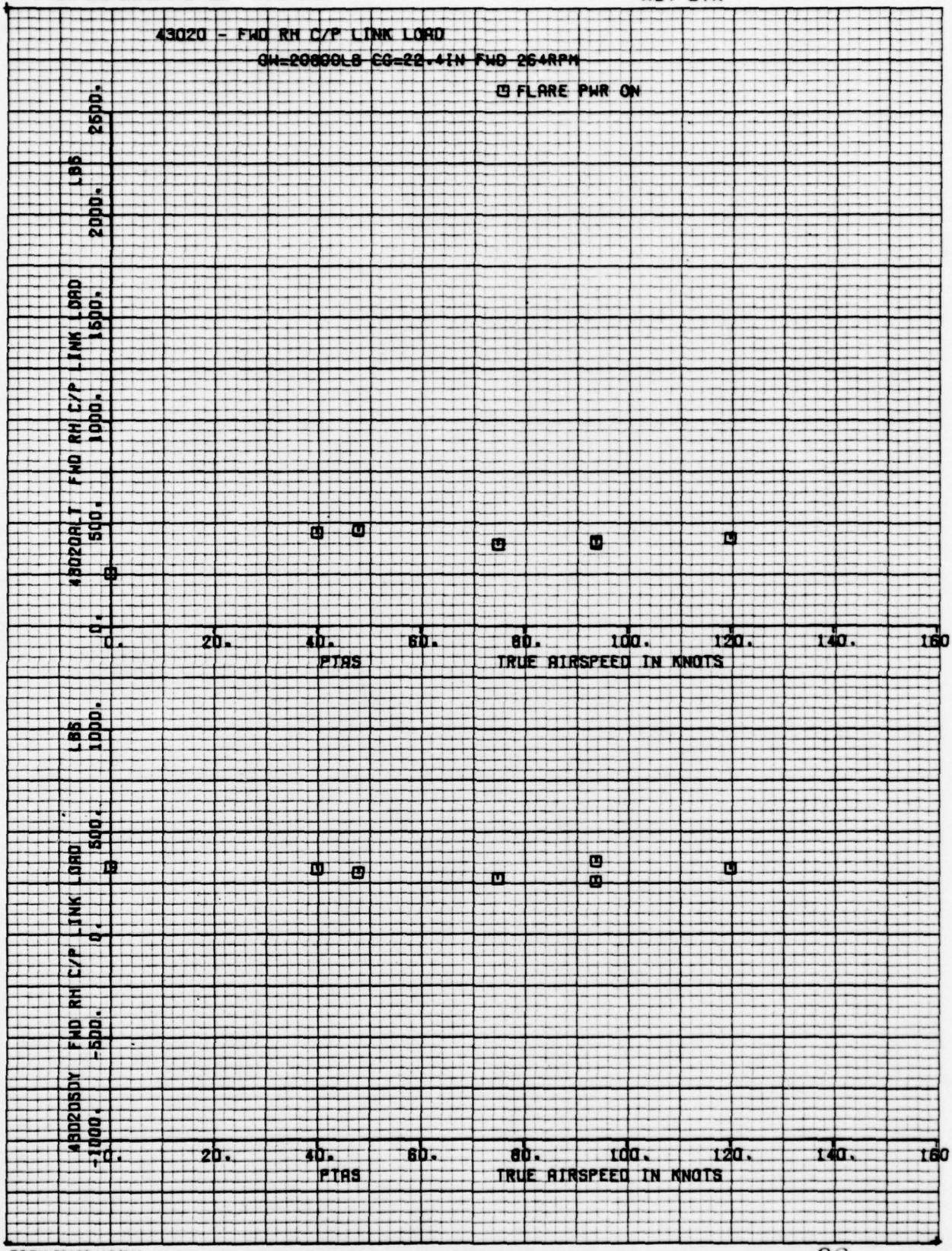


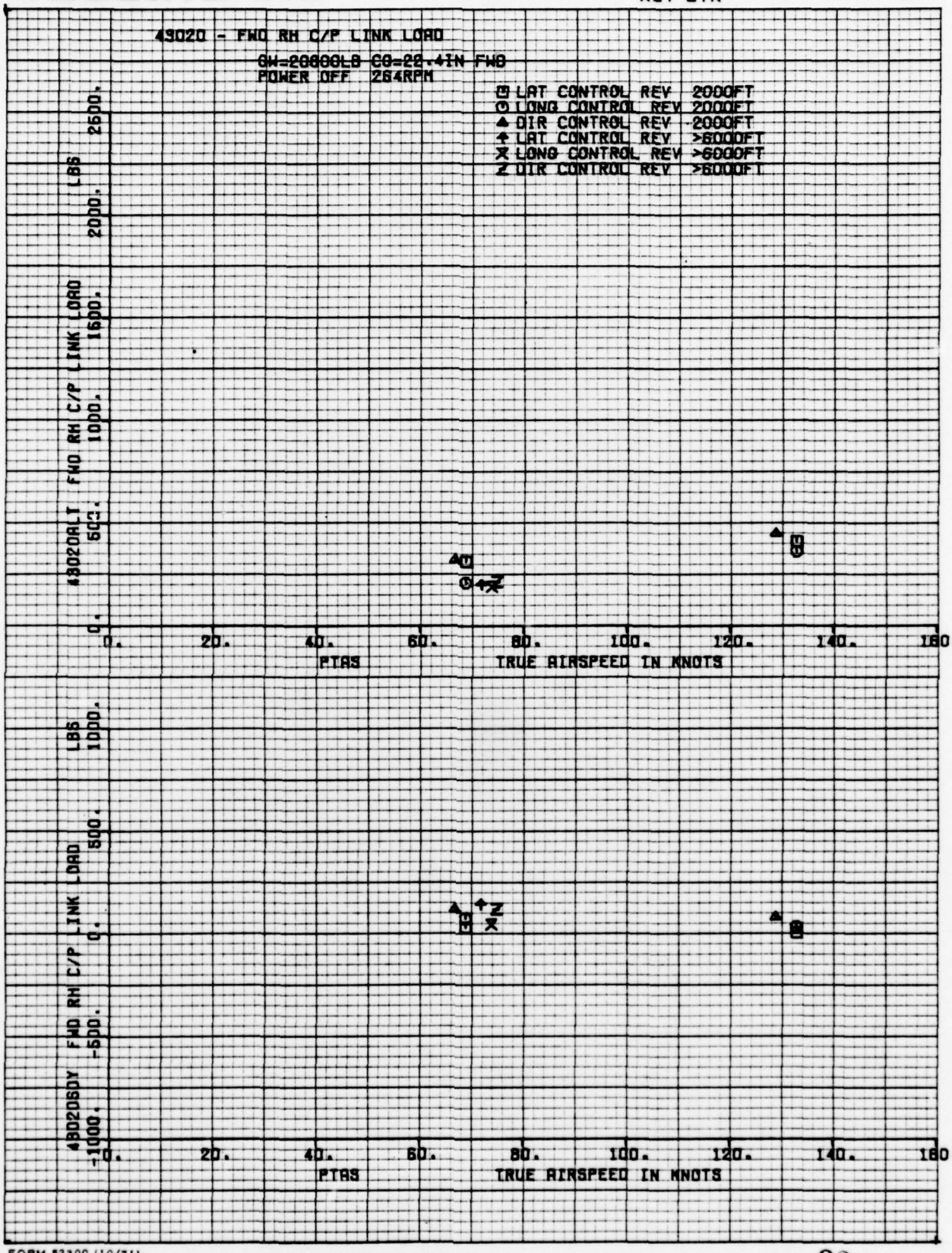
FORM 52300 (10/71)

THE BOEING COMPANY

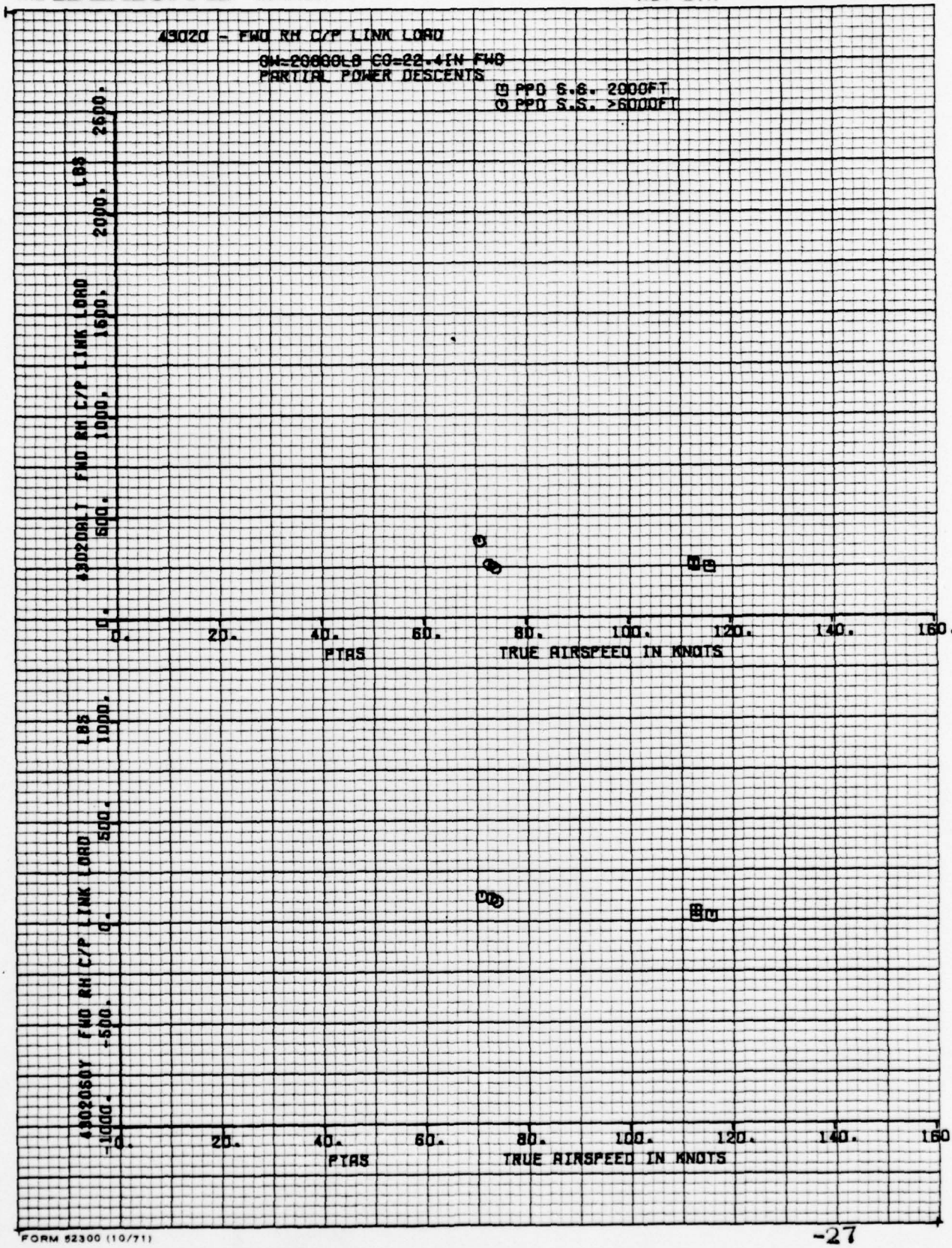


FORM 52300 (10/71)


43020 - FWD RH C/P LINK LOAD
GW=208000LB CG=22.4IN FWD 264RPM
FLARE PWR ON
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

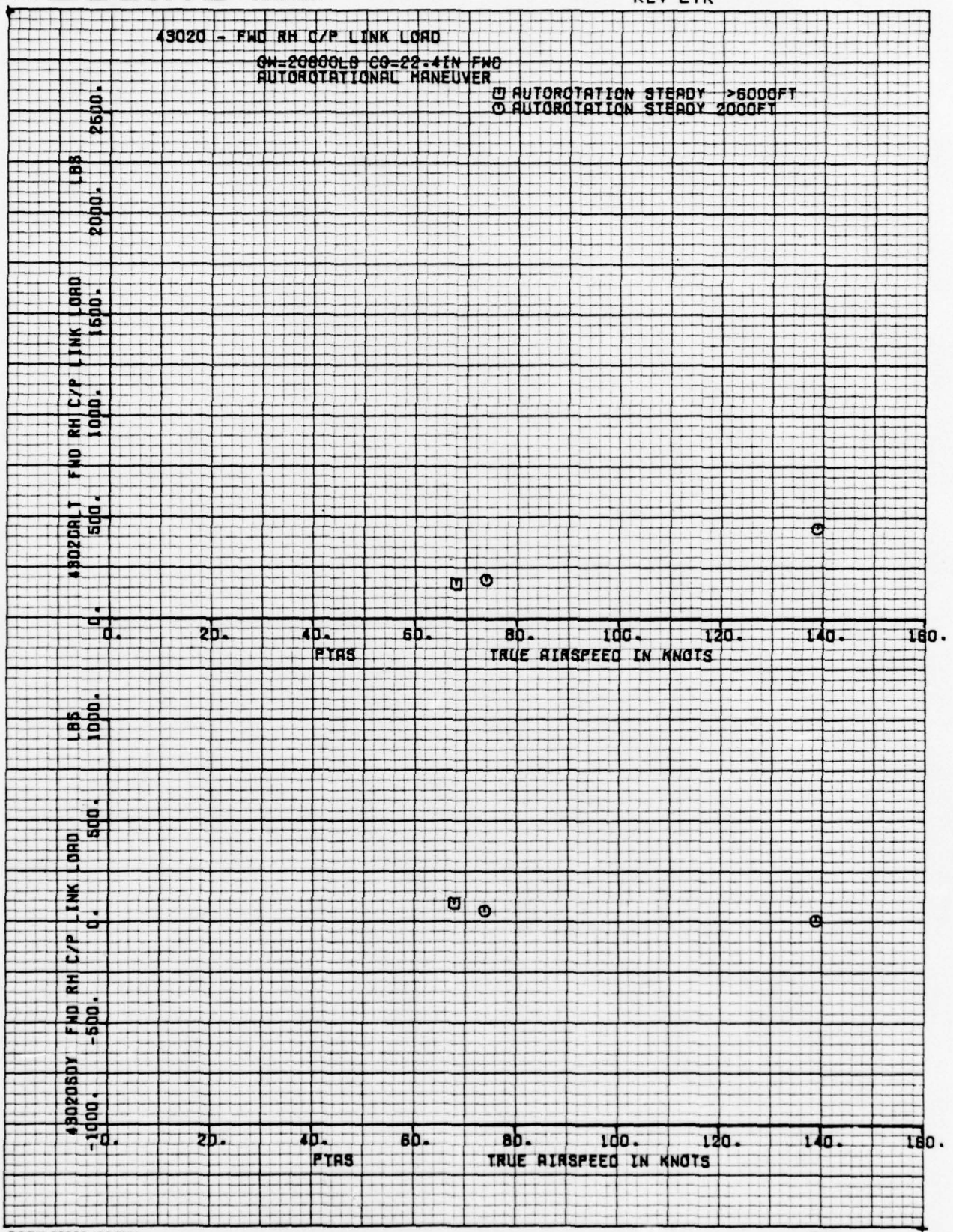

49020 - FWD RH C/P LINK LOAD
GW=20000LB CG=22.41N FWS
POWER OFF 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
48020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS
48020BDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

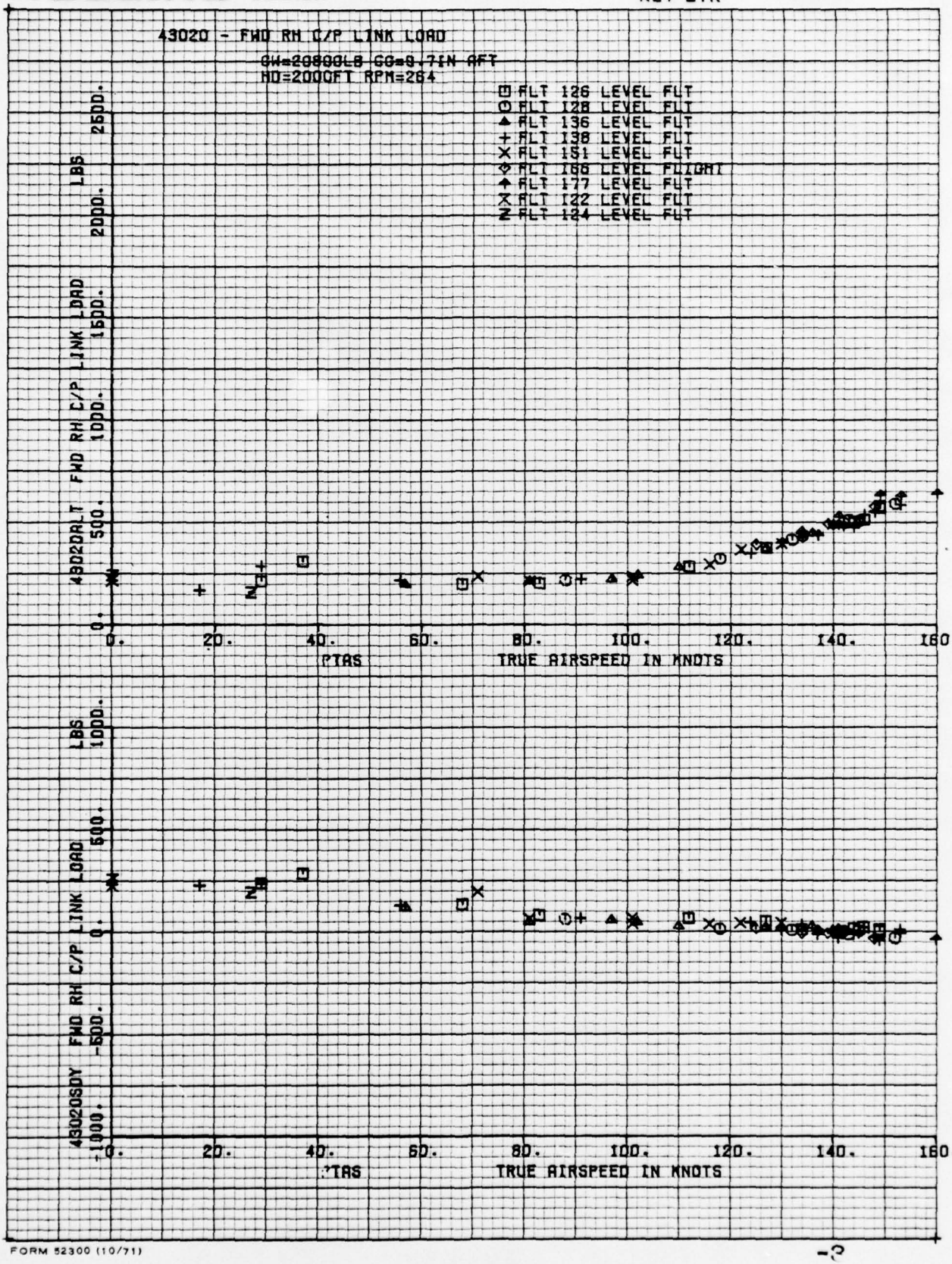


FORM 52300 (10/71)

SHEET 230

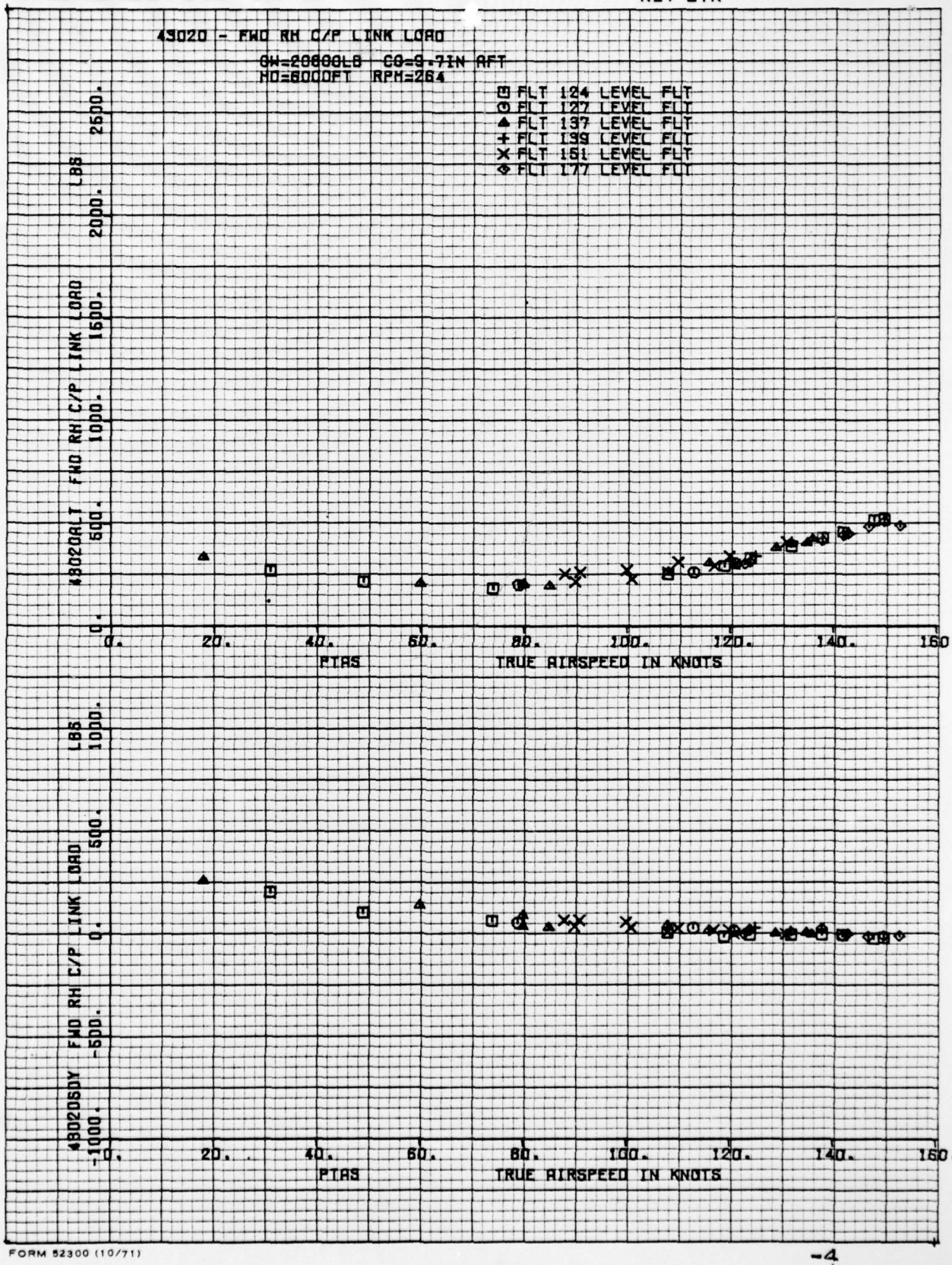


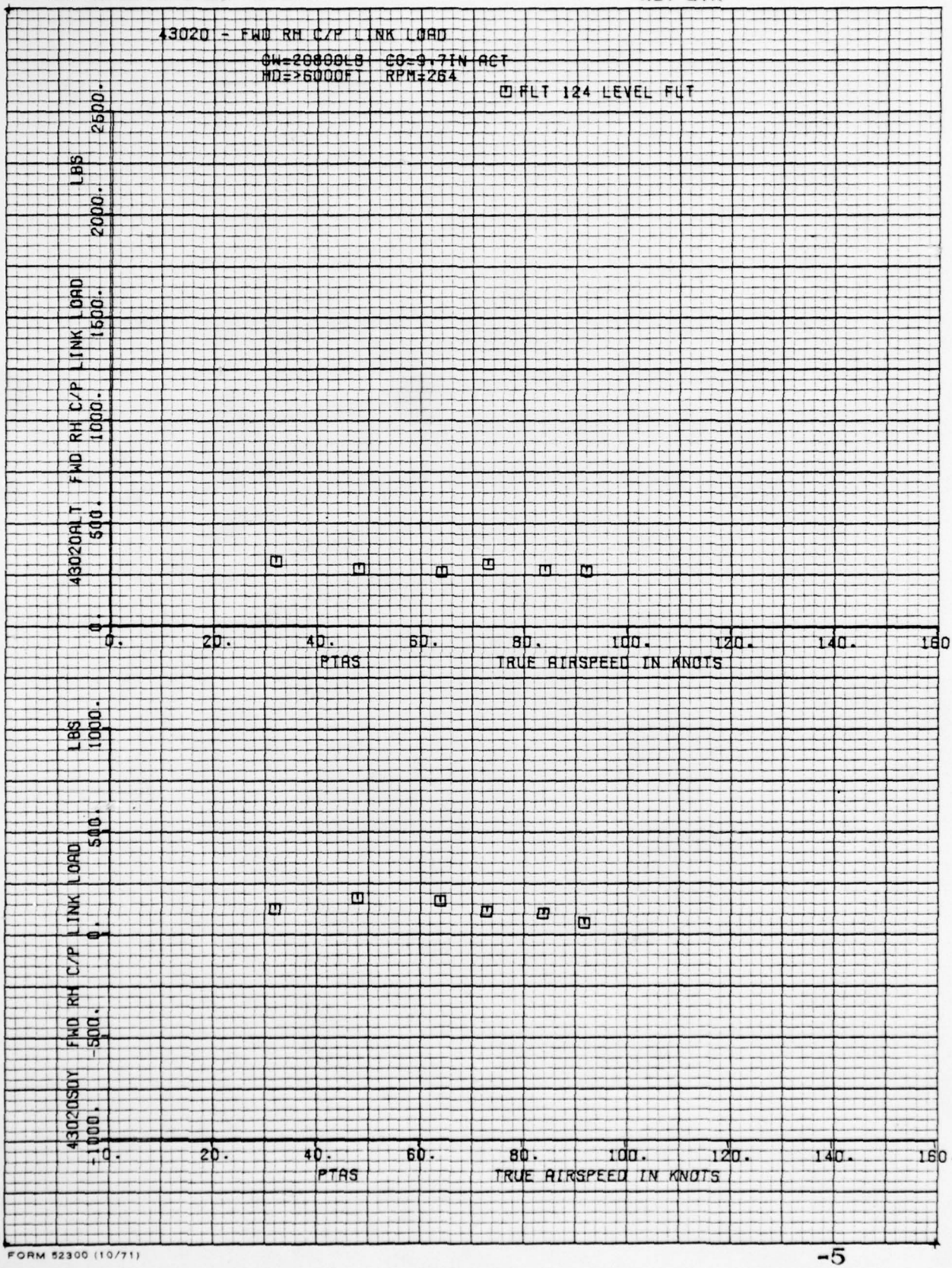
FORM 52300 (10/71)



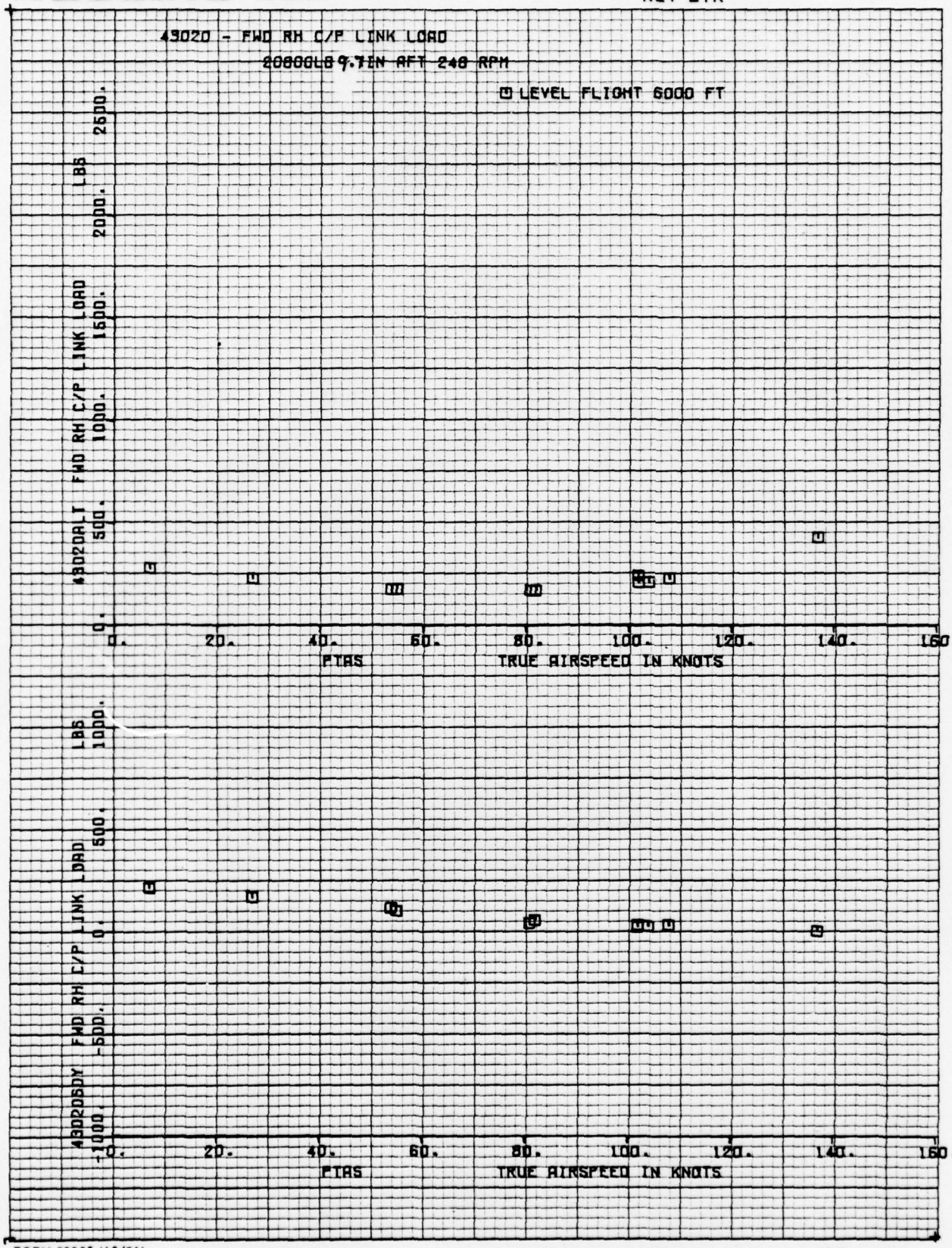
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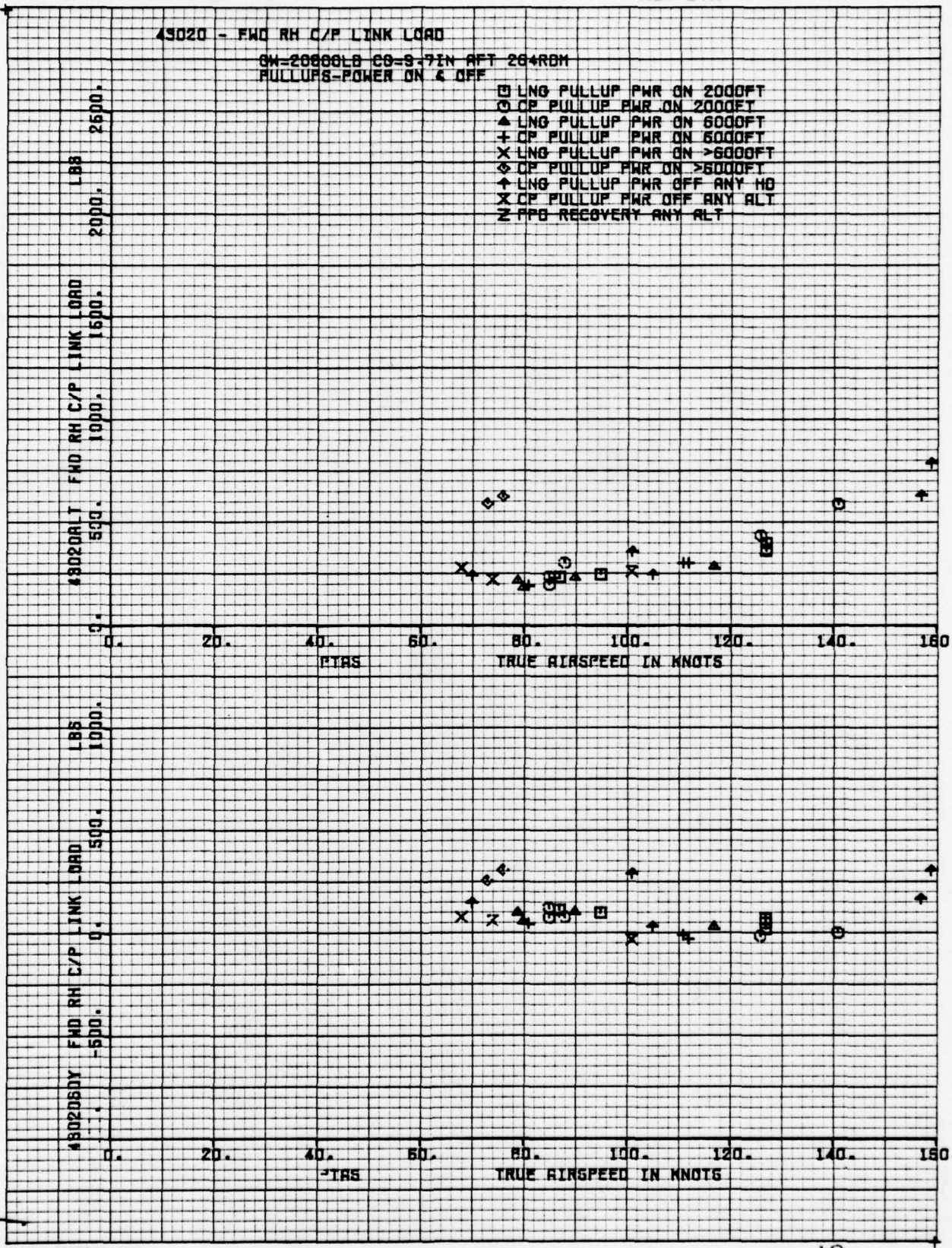
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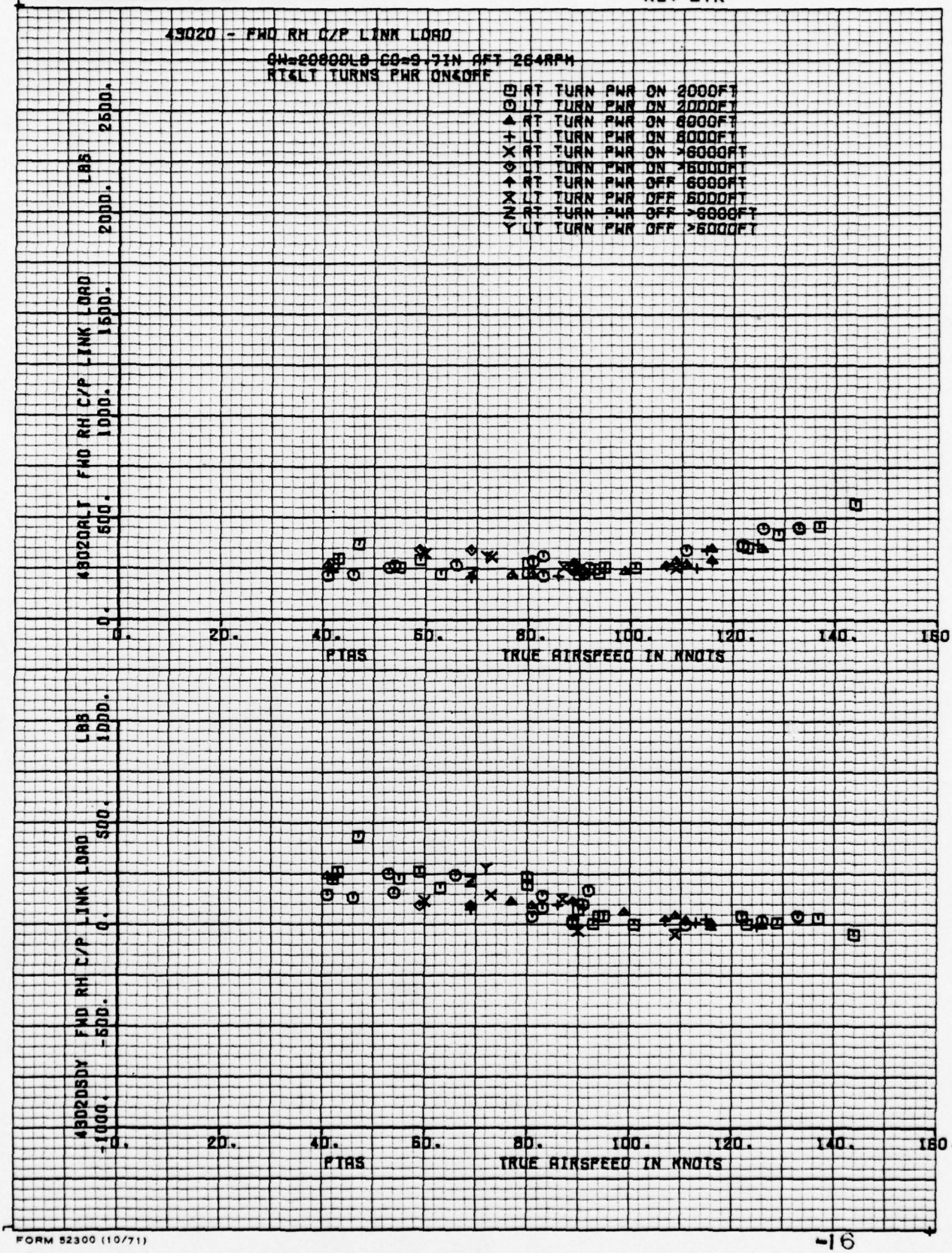

43020 - FWD RH C/P LINK LOAD
GW=20600LB CG=9.7IN AFT
HD=6000FT RPM=264
FLT 124 LEVEL FLT
FLT 127 LEVEL FLT
FLT 137 LEVEL FLT
FLT 139 LEVEL FLT
FLT 151 LEVEL FLT
FLT 177 LEVEL FLT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS


43020 - FWD RH C/P LINK LOAD
GW=208000LB CG=9.7IN ACT
MD=>6000FT RPM=264
FLT 124 LEVEL FLT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

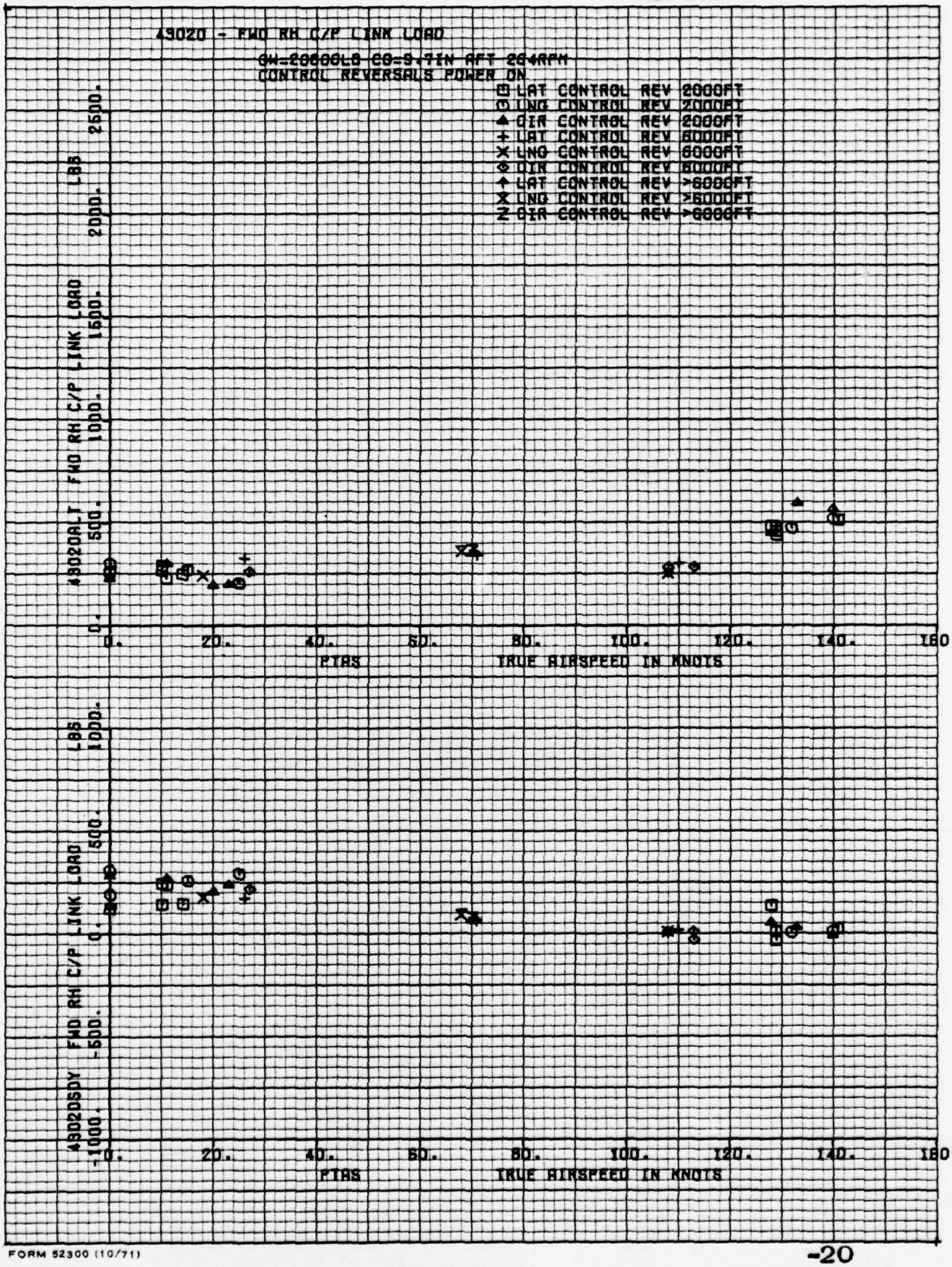
THE BOEING COMPANY




43020 - FWD RH C/P LINK LOAD
GW=208000LB CG=9.7IN AFT 284RBM
PULLUPS-POWER ON & OFF
LNG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 6000FT
CP PULLUP PWR ON 6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR OFF ANY HO
CP PULLUP PWR OFF ANY ALT
FPG RECOVERY ANY ALT
43020ALT FWD RH C/P LINK LOAD LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
43020DDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

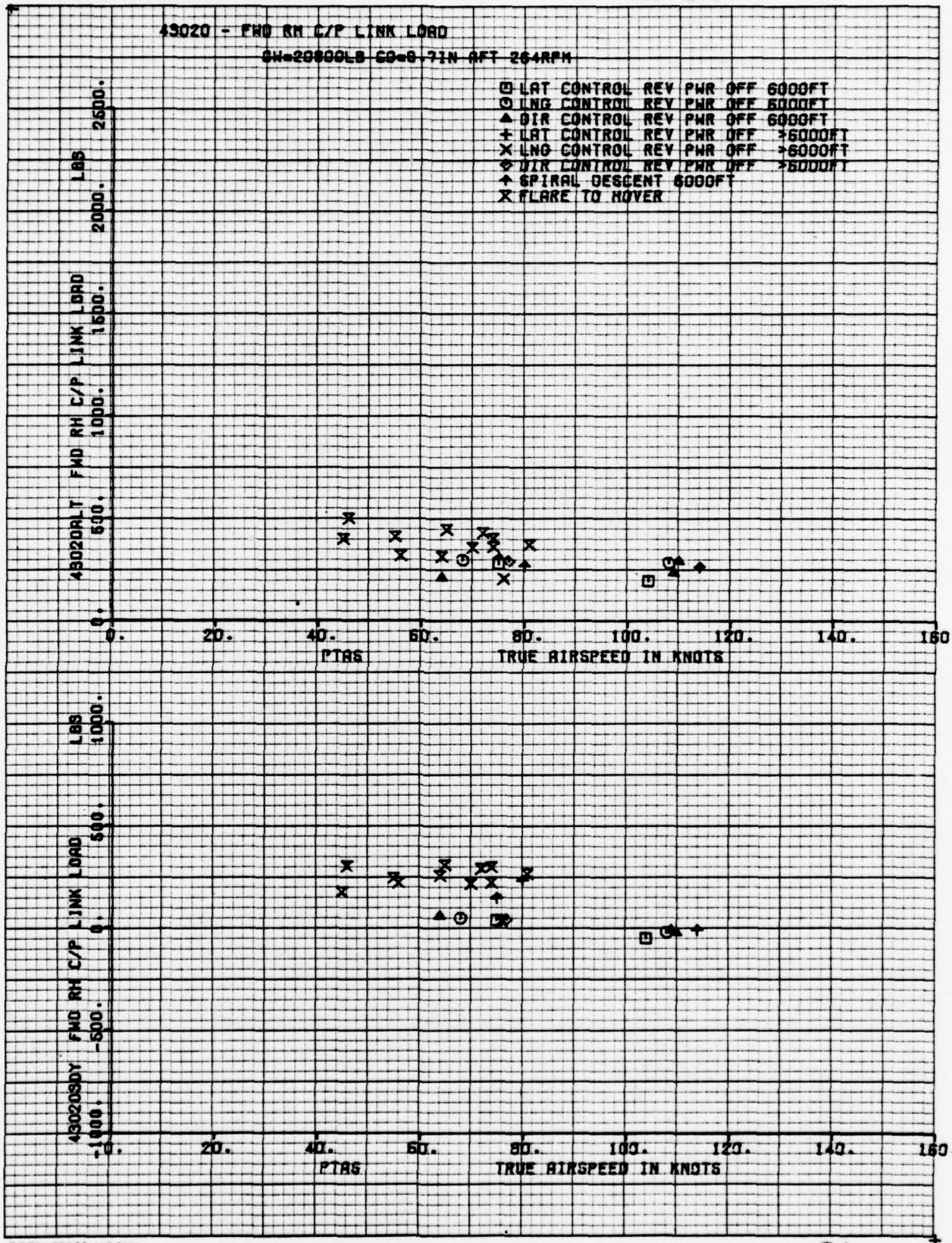

43020 - FWD RH C/P LINK LOAD
GW=208000LB CG=9.7IN AFT 264RPM
RT&LT TURNS PWR ON&OFF
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
RT TURN PWR ON 6000FT
LT TURN PWR ON 6000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF 6000FT
LT TURN PWR OFF 6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
43020ALF FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

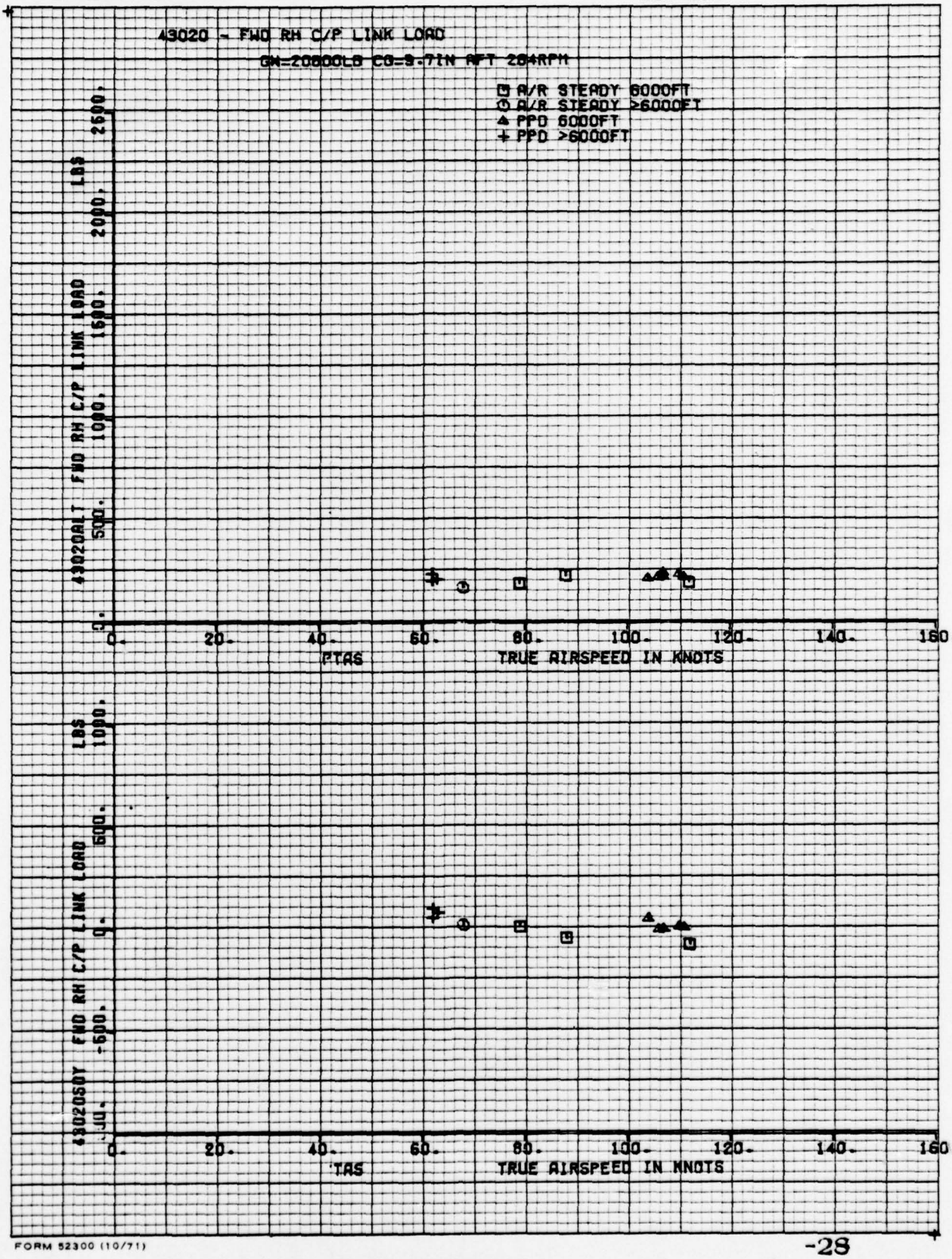


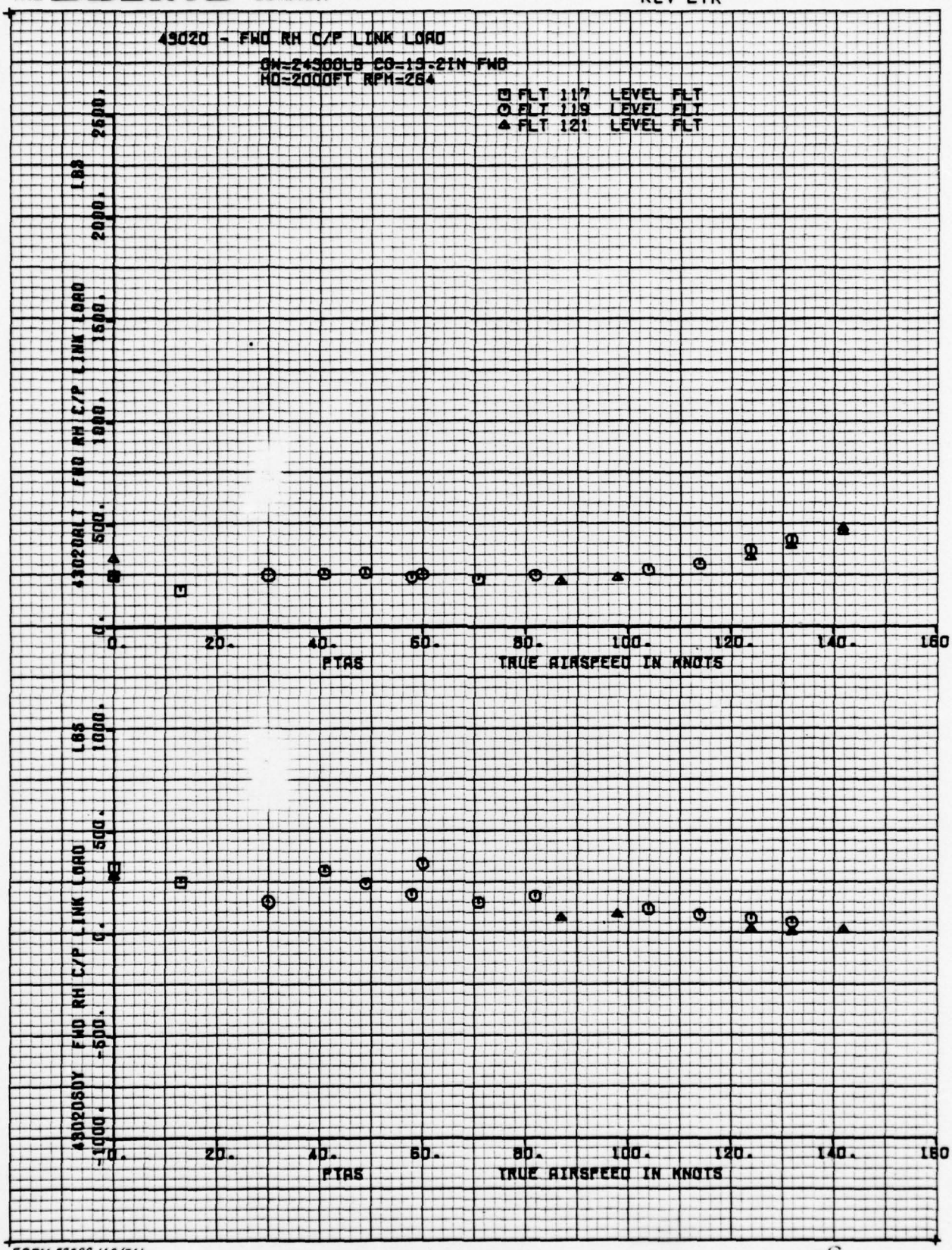
FORM 52300 (10/71)

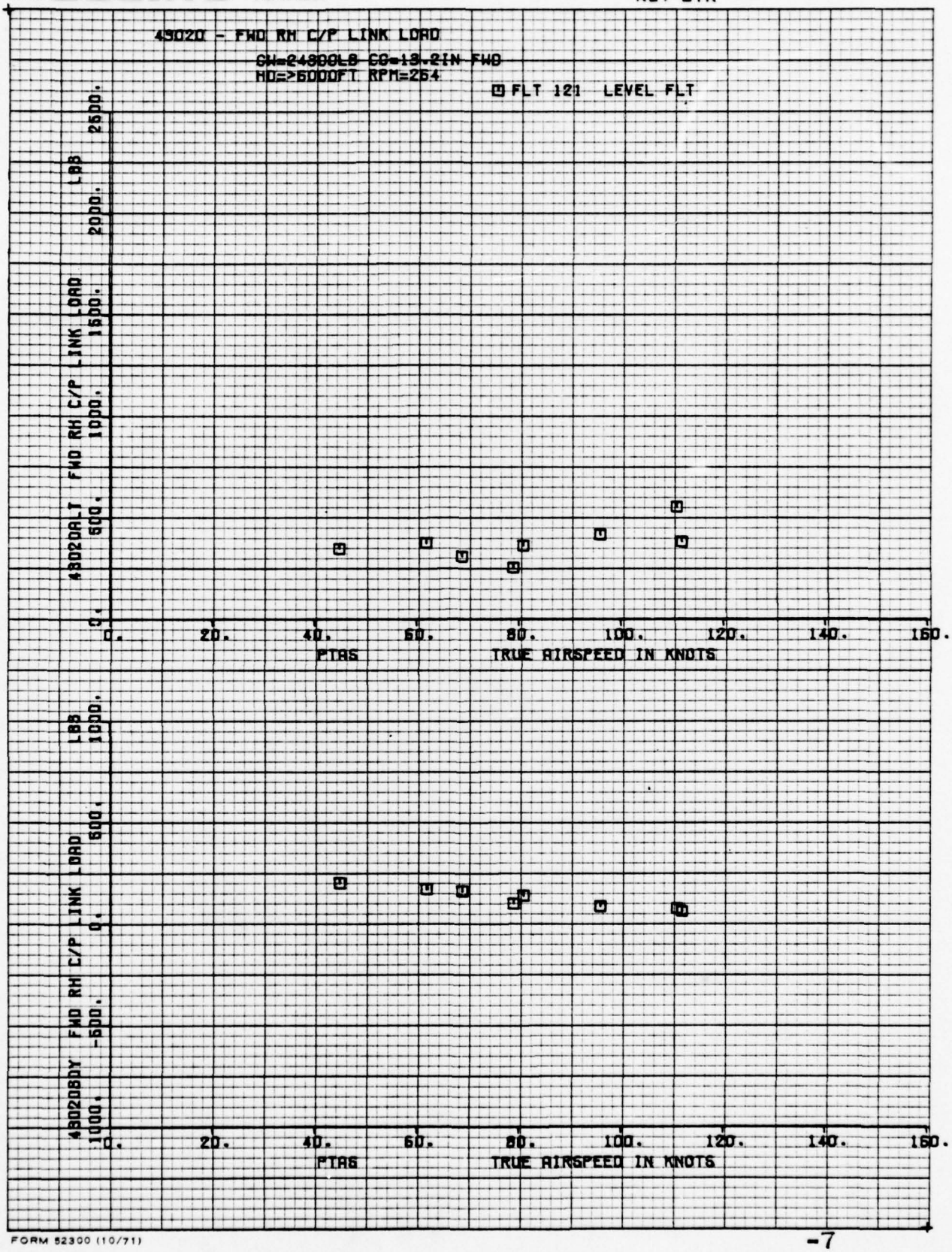
THE BOEING COMPANY



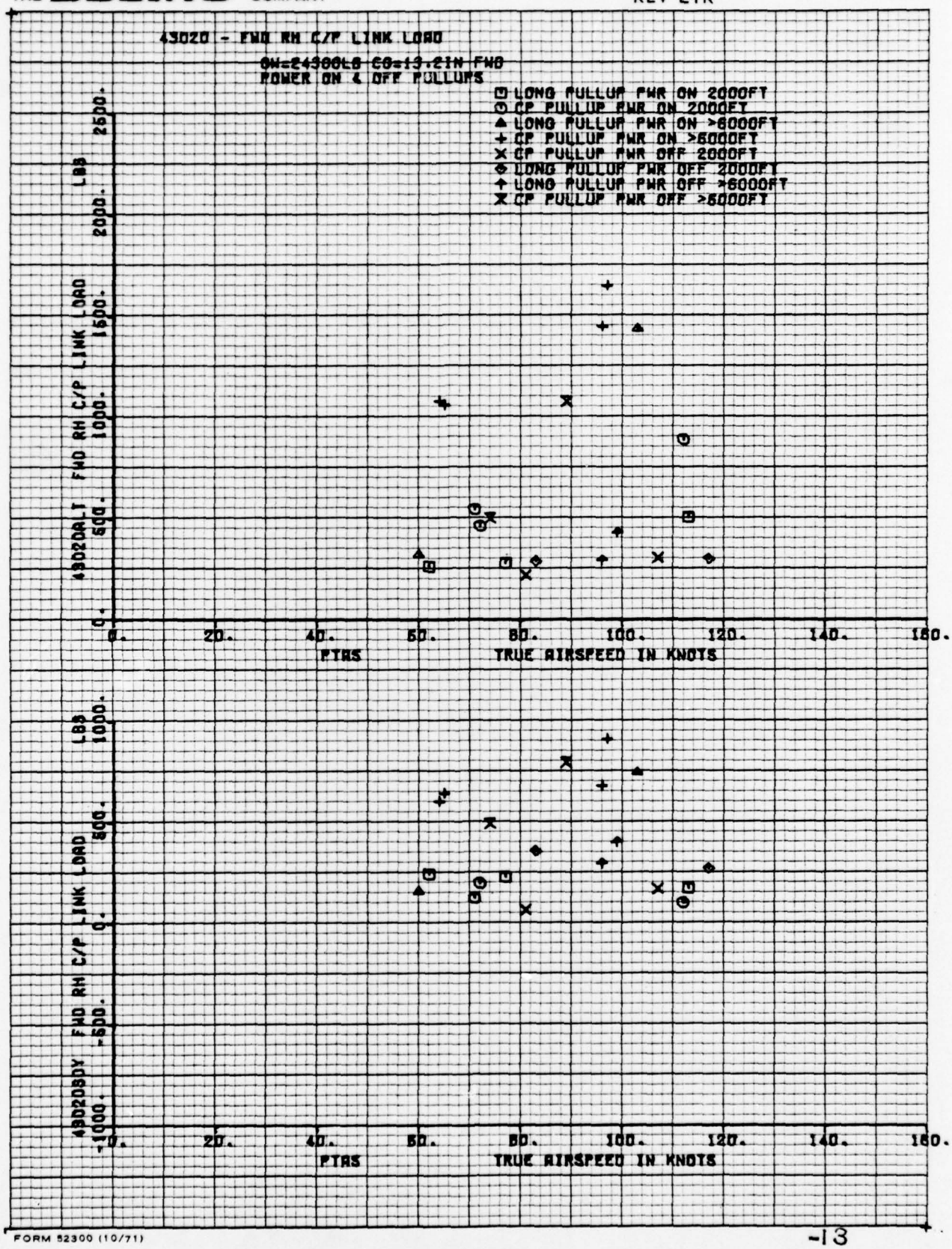
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43020 - FWD RH C/P LINK LOAD
GW=20000LB CG=9.7IN AFT 284RPM
A/R STEADY 6000FT
A/R STEADY >6000FT
PPD 6000FT
PPD >6000FT
43020ALT FWD RH C/P LINK LOAD LBS
2600.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
600.
0.
-600.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
TAS
TRUE AIRSPEED IN KNOTS


49020 - FWD RH C/P LINK LOAD
GW=243000LB CG=19.2IN FWD
HO=2000FT RPH=264
FLT 117 LEVEL FLT
FLT 119 LEVEL FLT
FLT 121 LEVEL FLT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS

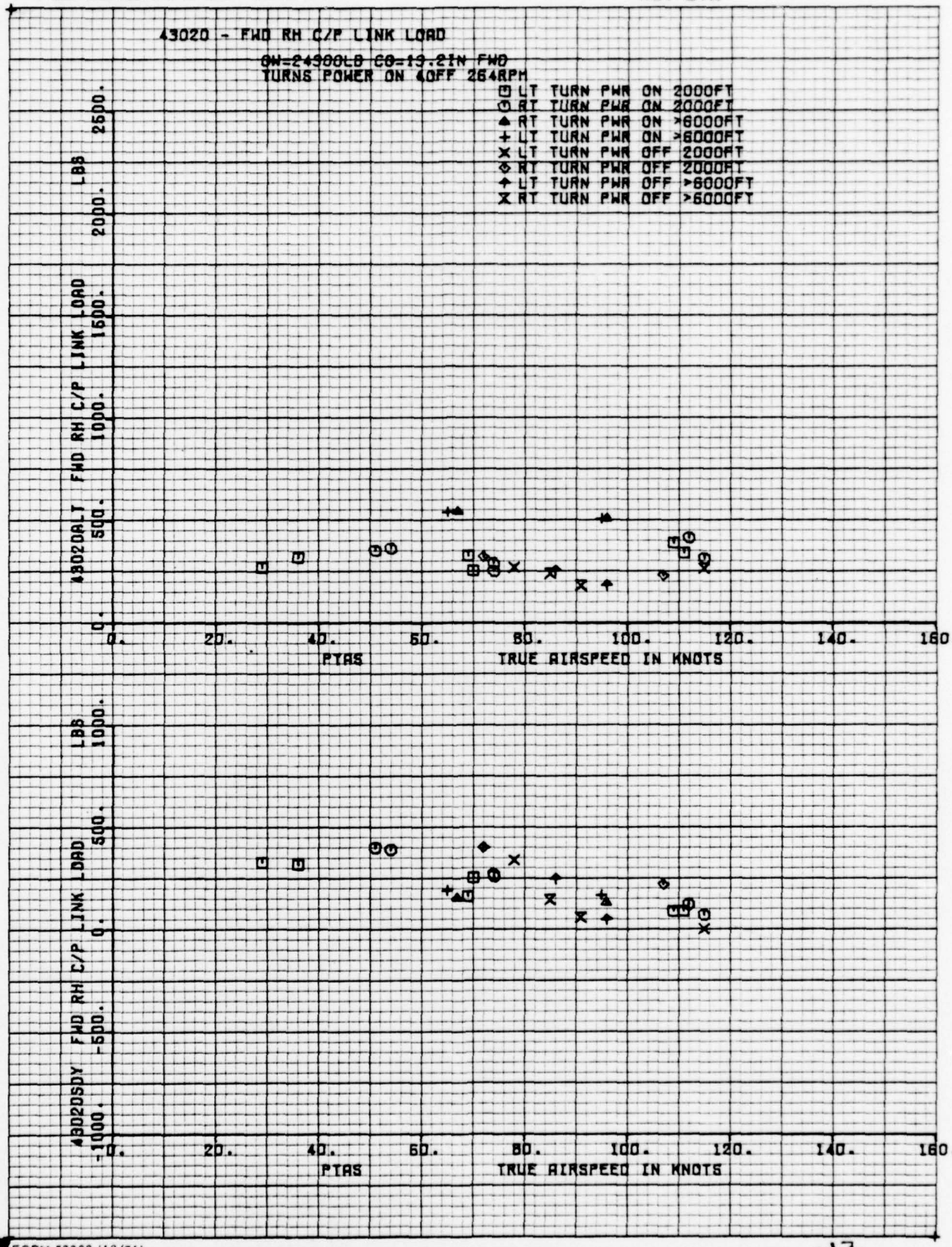

43020 - FWD RH C/P LINK LOAD
GW=243000LB CG=13.2IN FWD
HD=>6000FT RPM=264
FLT 121 LEVEL FLT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43020BDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

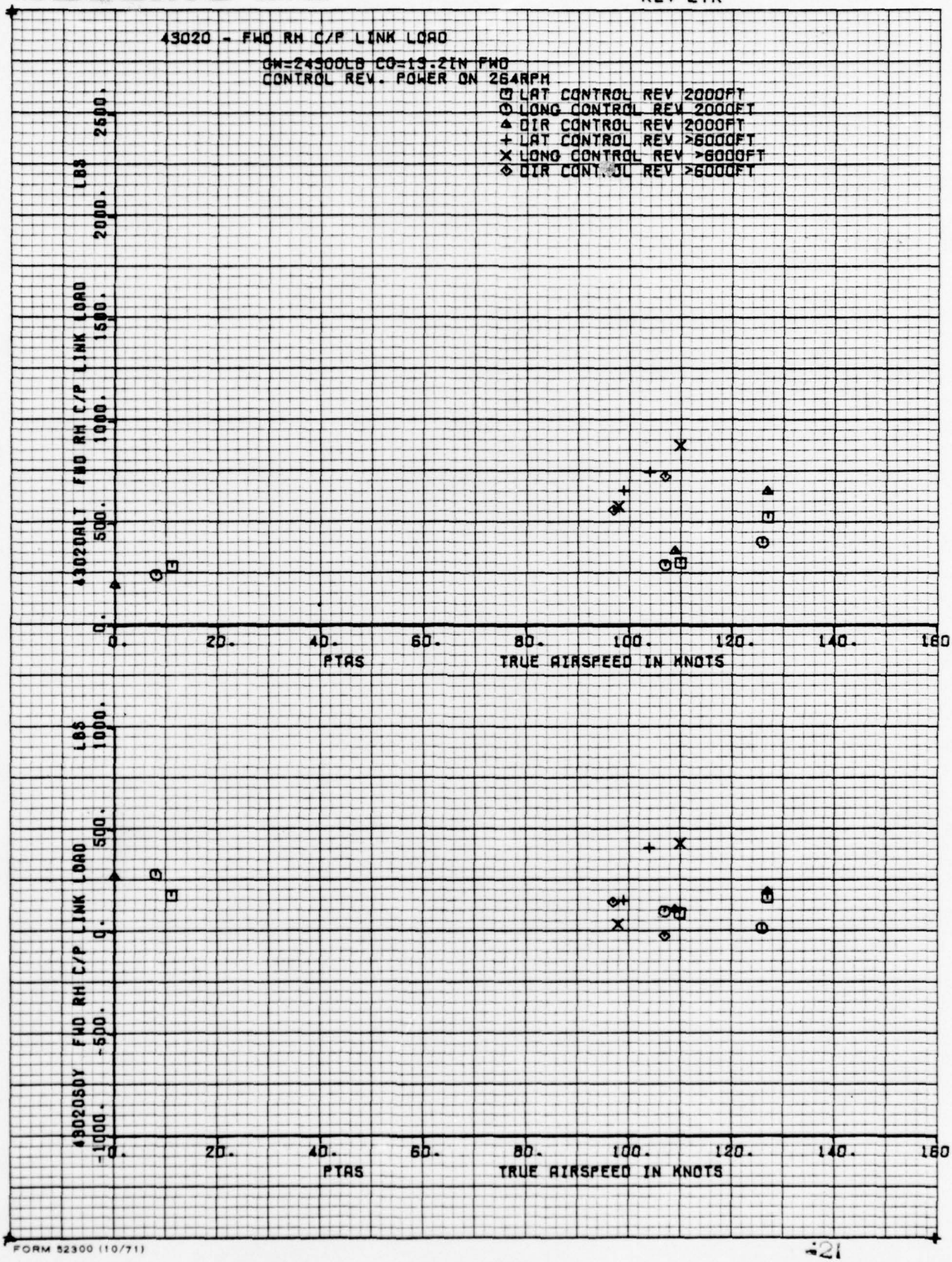


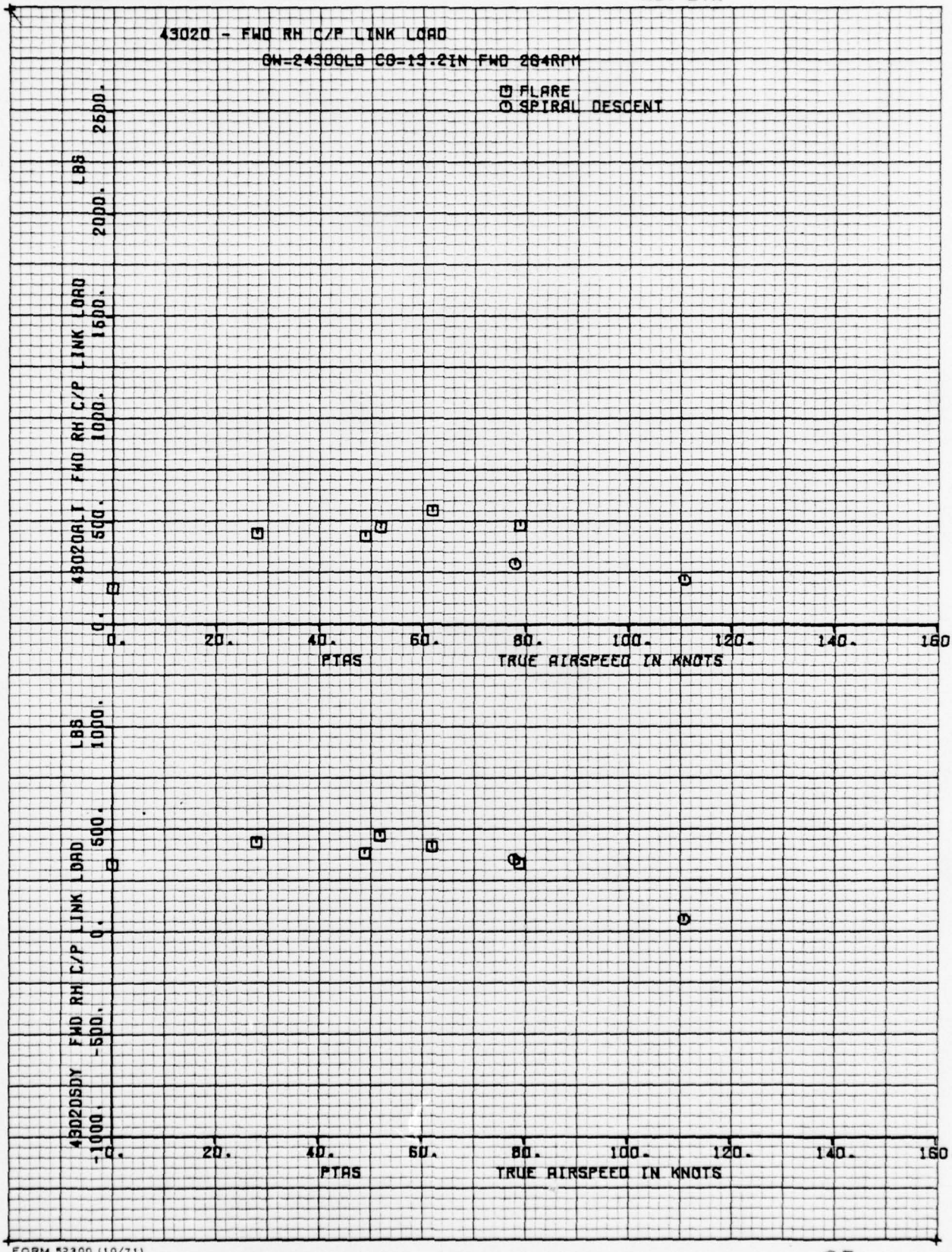
FORM 52300 (10/71)

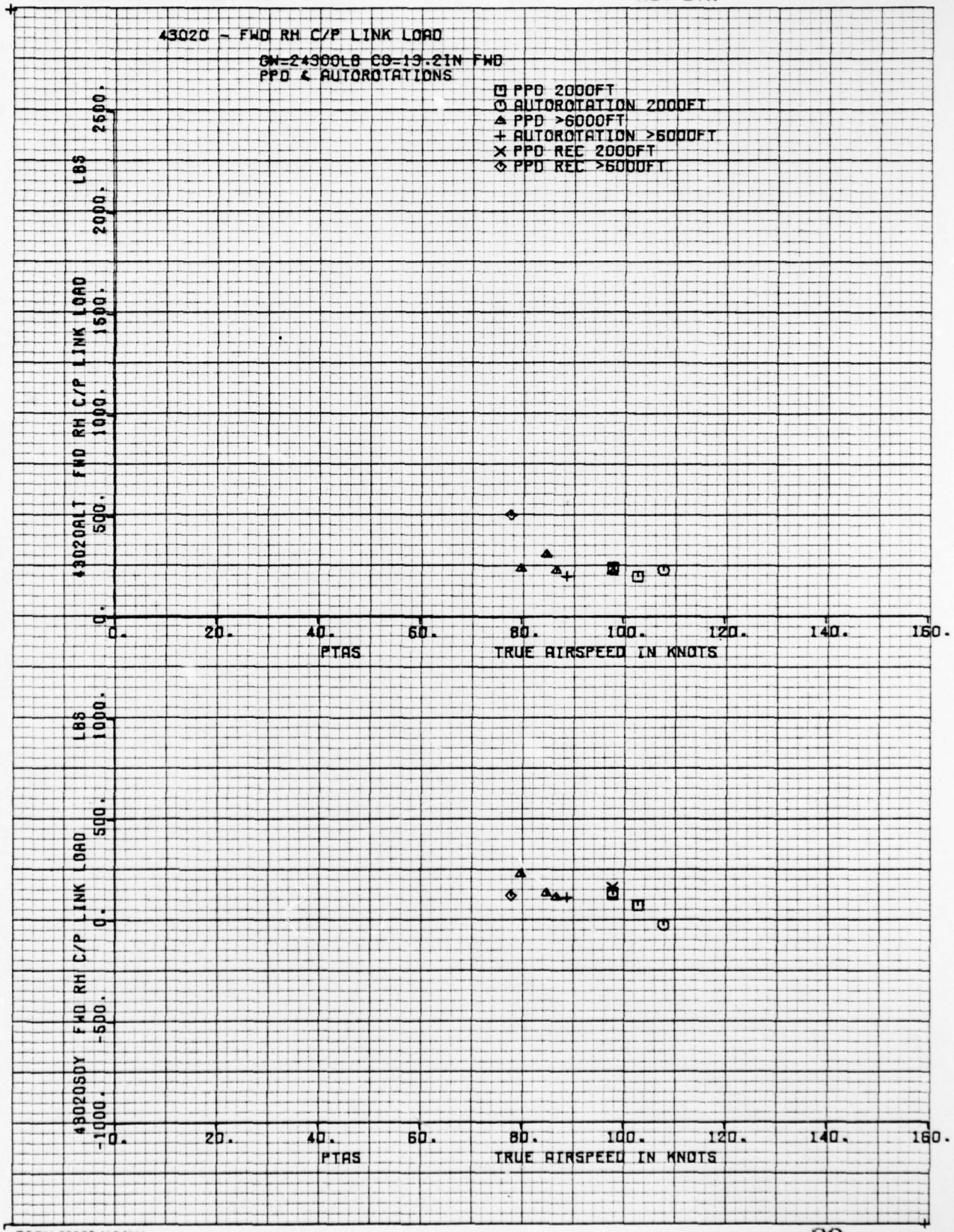
THE BOEING COMPANY

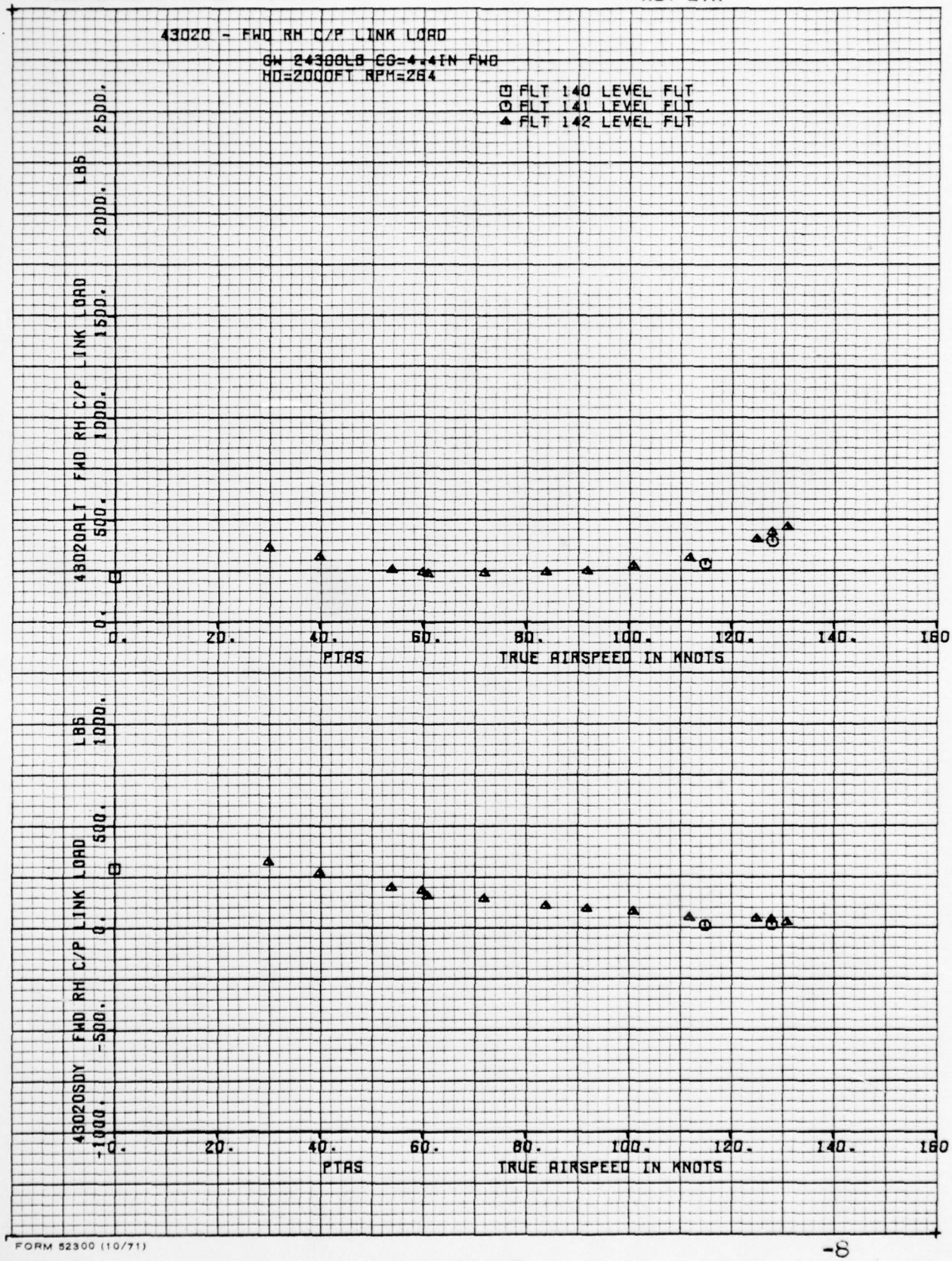


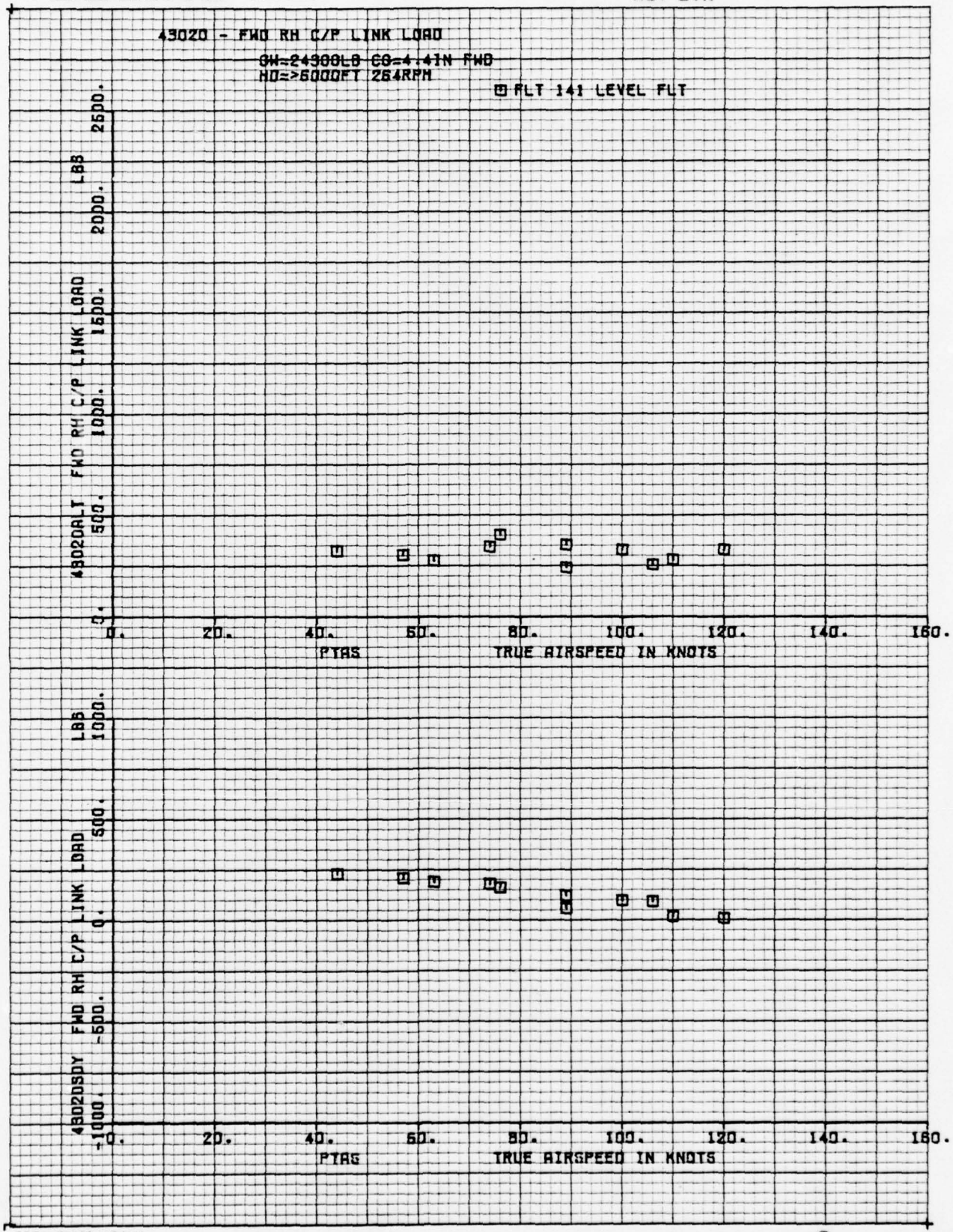
FORM 52300 (10/71)

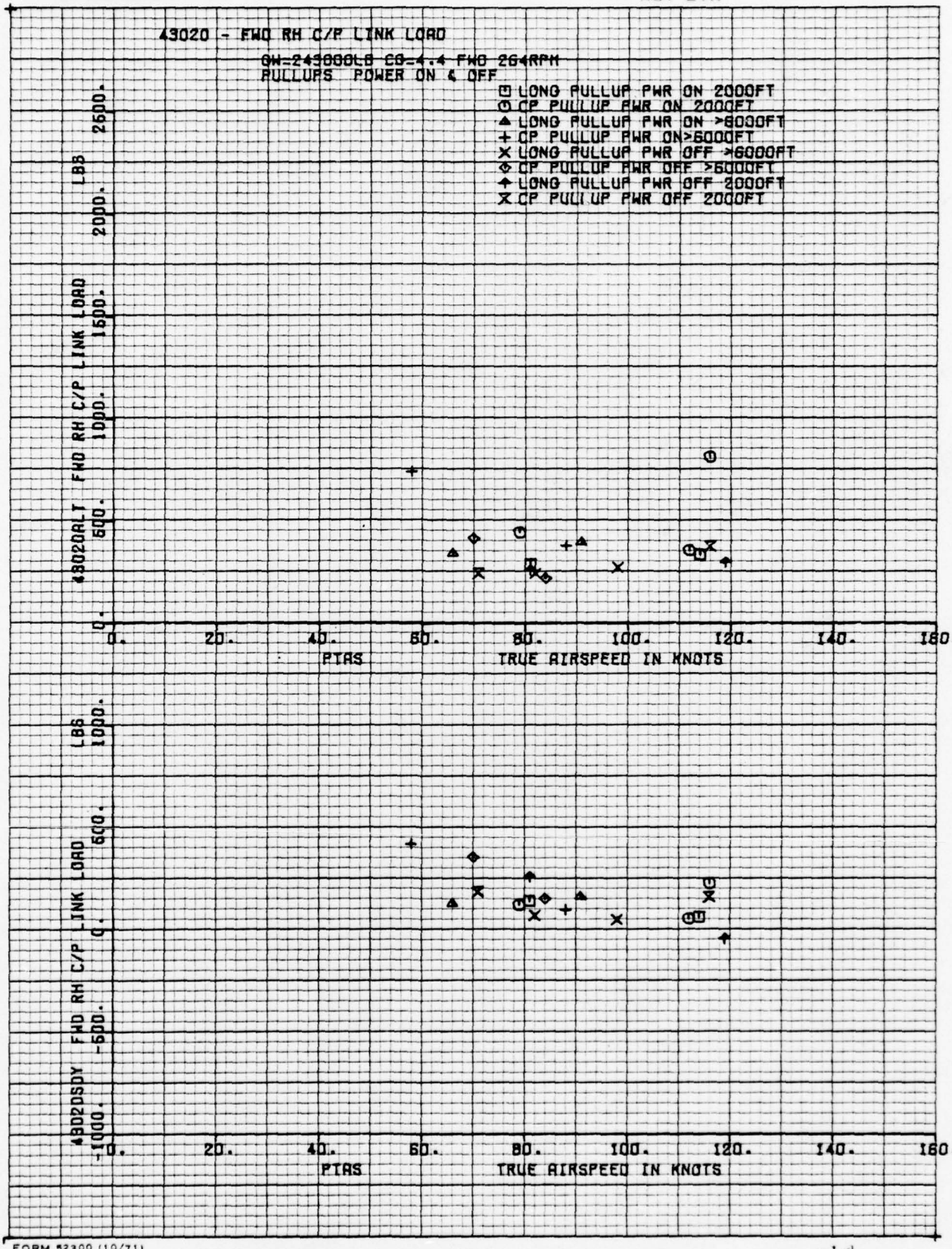

43020 - FWD RH C/P LINK LOAD
GW=24300LB CG=19.2IN FWD
CONTROL REV. POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43020ALT FWD RH C/P LINK LOAD LBS
2600.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS

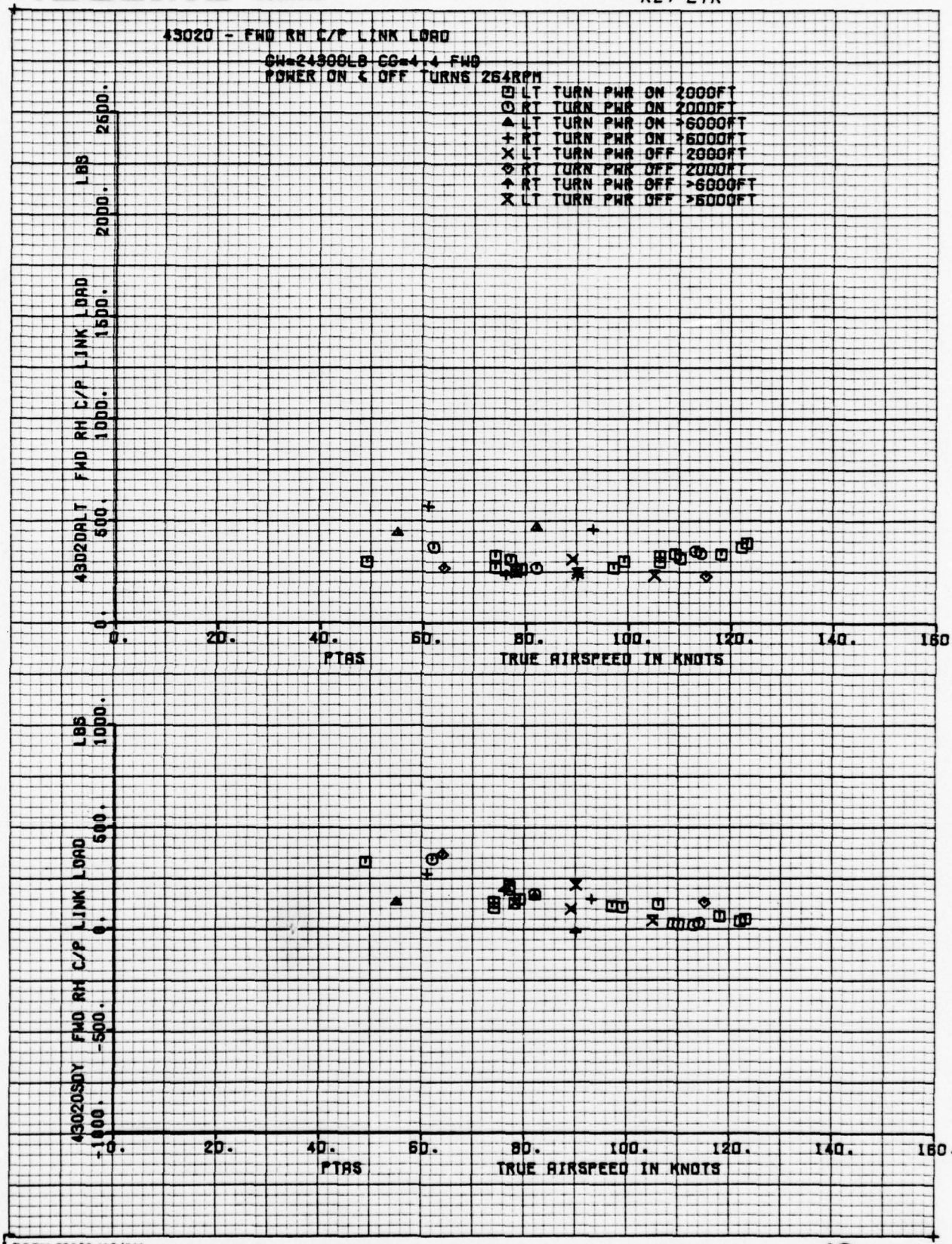

43020 - FWD RH C/P LINK LOAD
GW=24300LB CG=13.2IN FWD 264RPM
FLARE
SPIRAL DESCENT
43020ALI FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

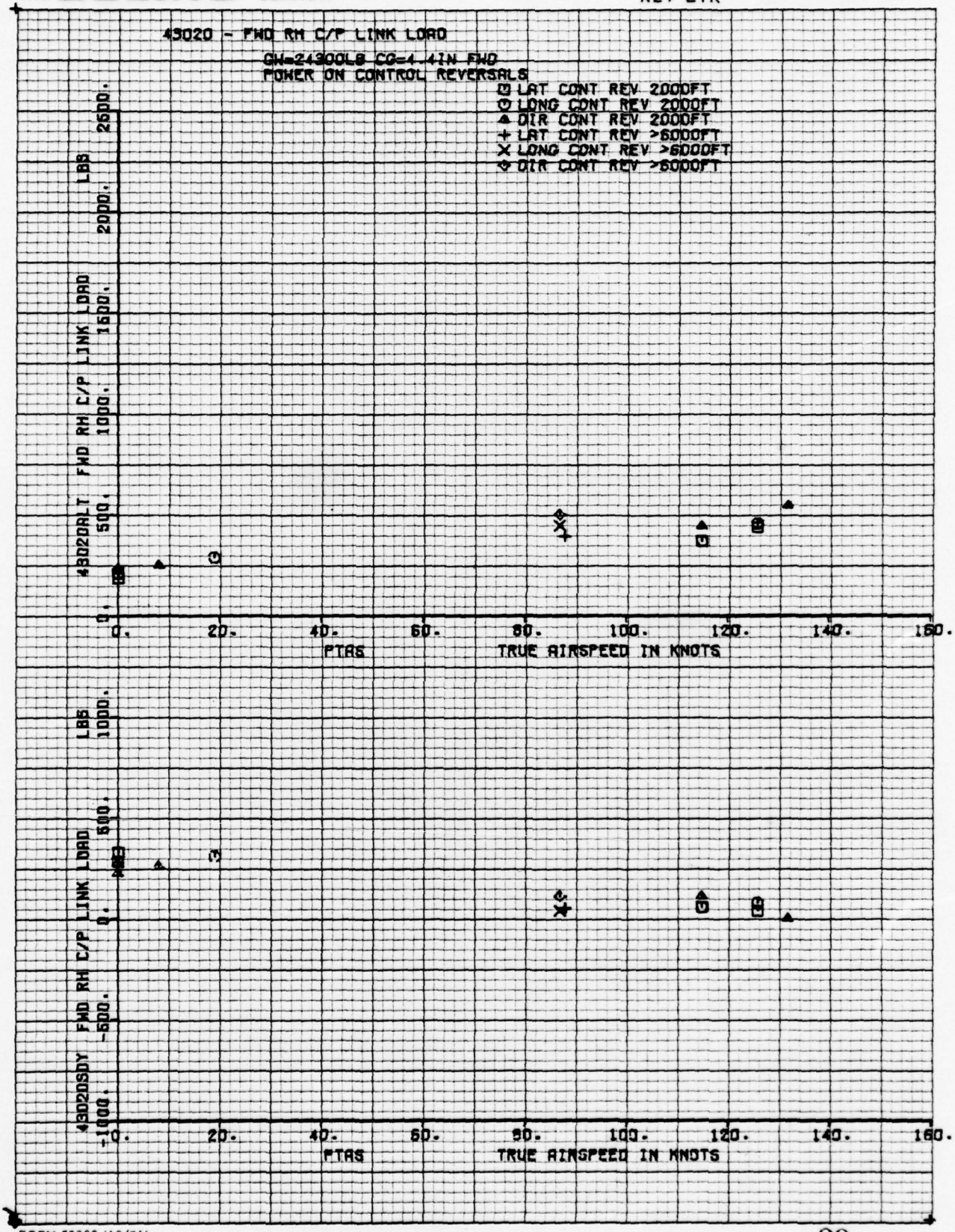

43020 - FWD RH C/P LINK LOAD
GW=24300LB CG=13.21N FWD
PPD & AUTOROTATIONS
PPD 2000FT
AUTOROTATION 2000FT
PPD >6000FT
AUTOROTATION >6000FT
PPD REC 2000FT
PPD REC >6000FT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS

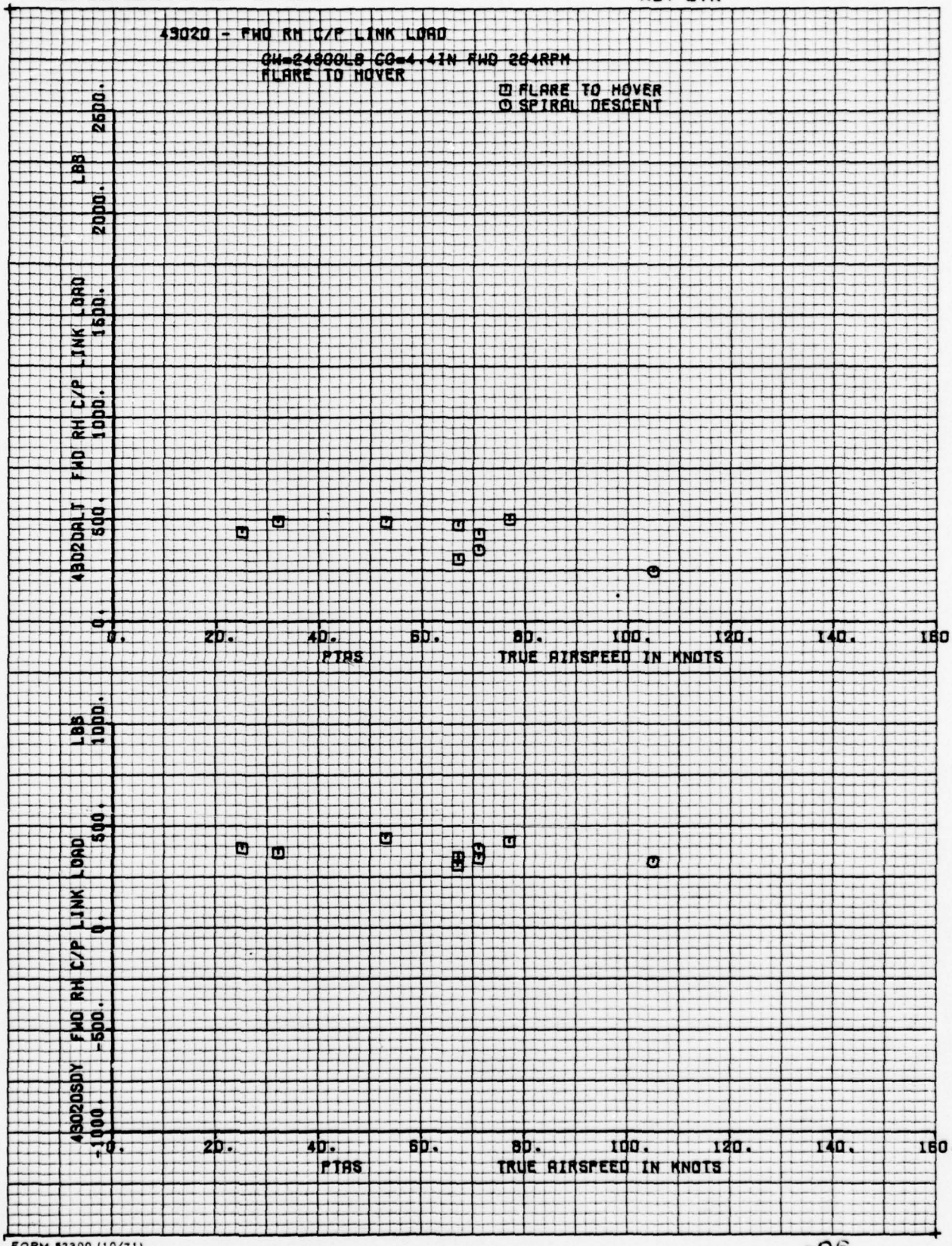

43020 - FWD RH C/P LINK LOAD
GW 24300LB CG=4.4IN FWD
HO=20000FT RPM=264
FLT 140 LEVEL FLT
FLT 141 LEVEL FLT
FLT 142 LEVEL FLT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS


43020 - FWD RH C/P LINK LOAD
GW=24300LB CG=4.41N FWD
HO=>5000FT 264RPM
FLT 141 LEVEL FLT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

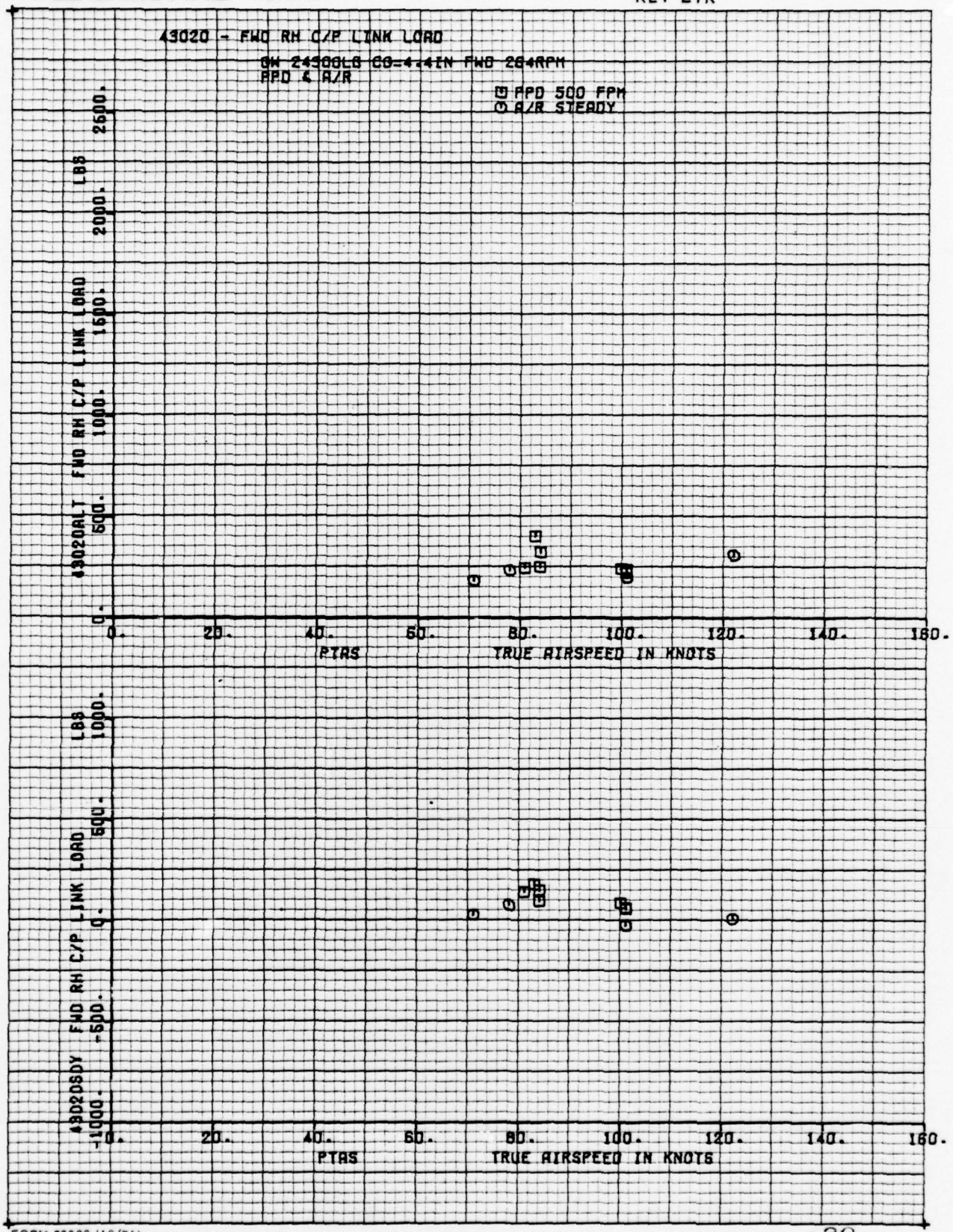

43020 - FWD RH C/P LINK LOAD
GW=243000LB CG=4.4 FWD 264RPM
PULLUPS POWER ON & OFF
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON>6000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
LONG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS
43020DSDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS

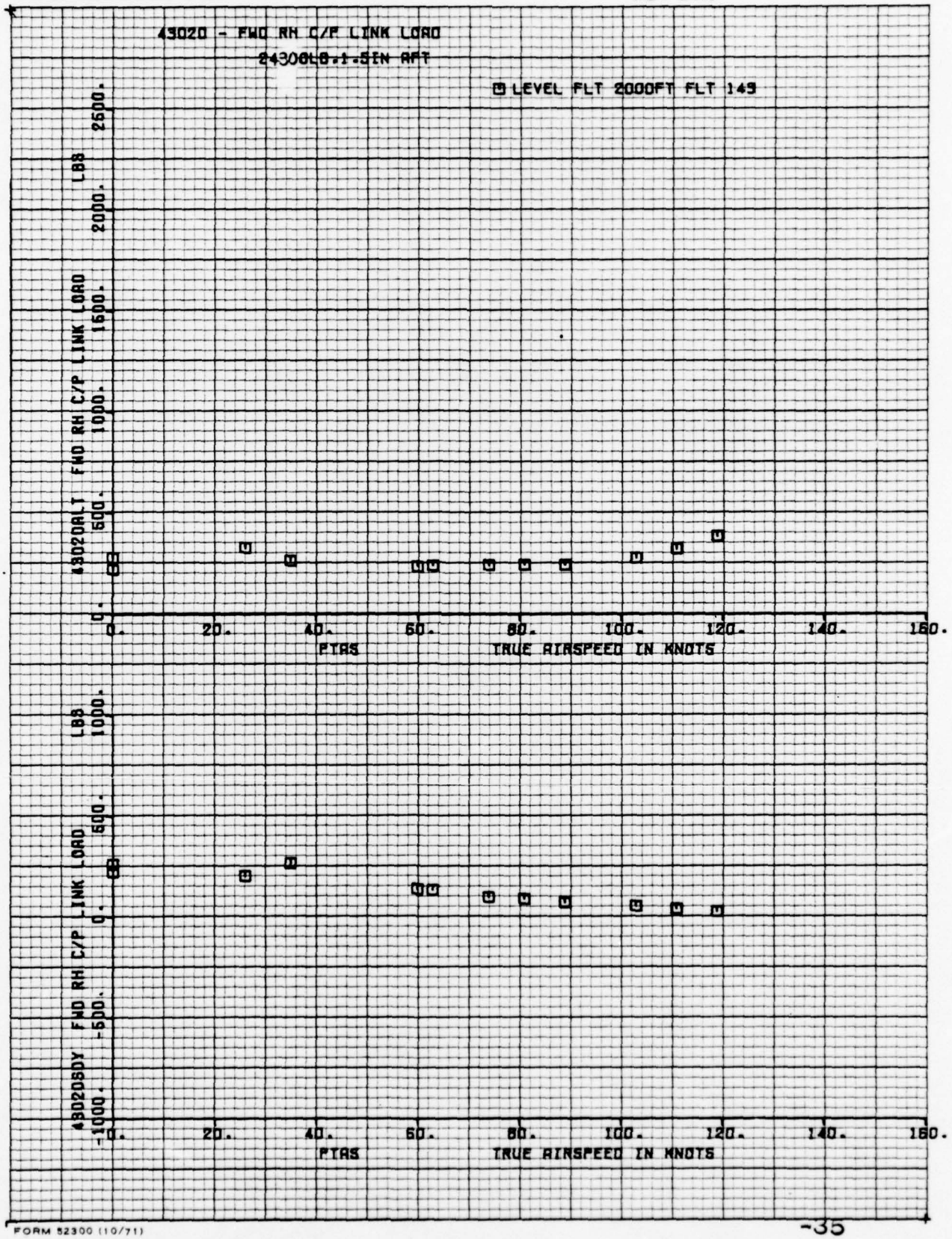

43020 - FWD RH C/P LINK LOAD
GW=243000LB CG=4.4 FWD
POWER ON & OFF TURNS 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
LT TURN PWR ON >6000FT
RT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS


43020 - FWD RH C/P LINK LOAD
GW=243001B CG=4.4IN FWD
POWER ON CONTROL REVERSALS
LAT CONT REV 2000FT
LONG CONT REV 2000FT
DIR CONT REV 2000FT
LAT CONT REV >6000FT
LONG CONT REV >6000FT
DIR CONT REV >6000FT
43020RLT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


49020 - FWD RH C/P LINK LOAD
GW=24800LB CG=4.41N FWD 264RPM
FLARE TO HOVER
① FLARE TO HOVER
② SPIRAL DESCENT
4802DALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS
4802DSDV FWD RH C/P LINK LOAD LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS

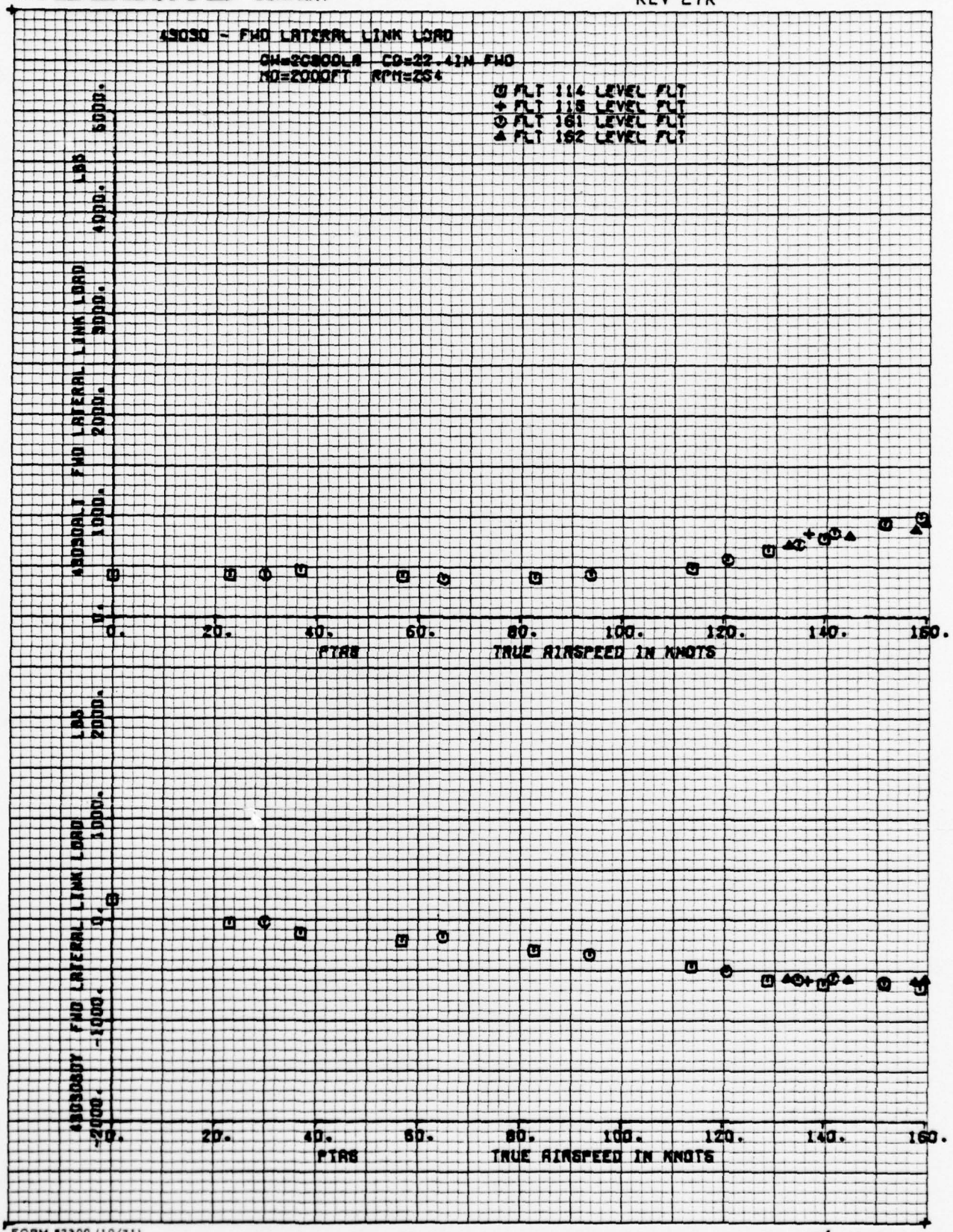
THE BOEING COMPANY



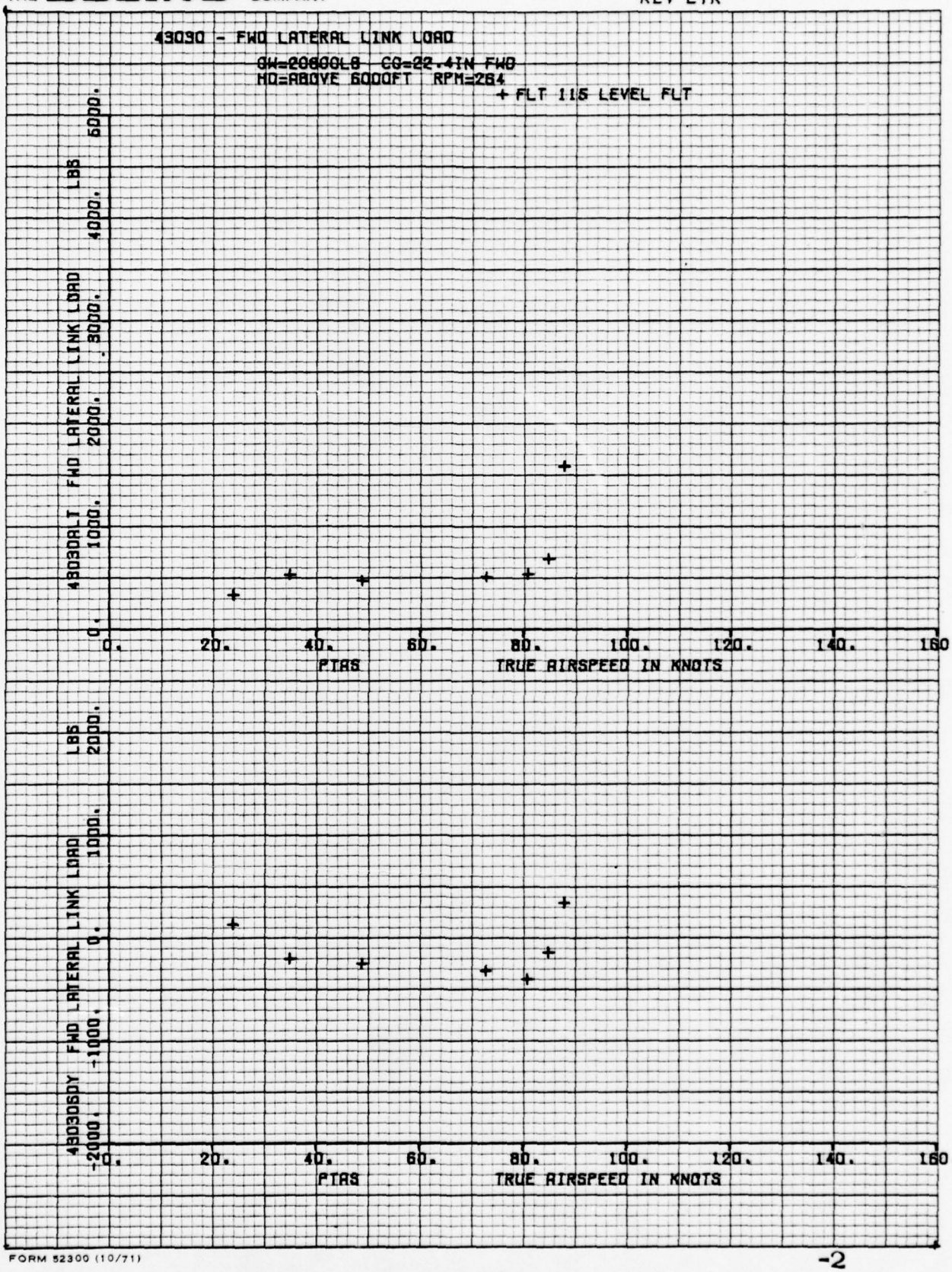

43020 - FWD RH C/P LINK LOAD
24300LB,1.5IN AFT
LEVEL FLT 2000FT FLT 149
43020ALT FWD RH C/P LINK LOAD LBS
2500.
2000.
1600.
1000.
600.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43020SDY FWD RH C/P LINK LOAD LBS
1000.
600.
0.
-600.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

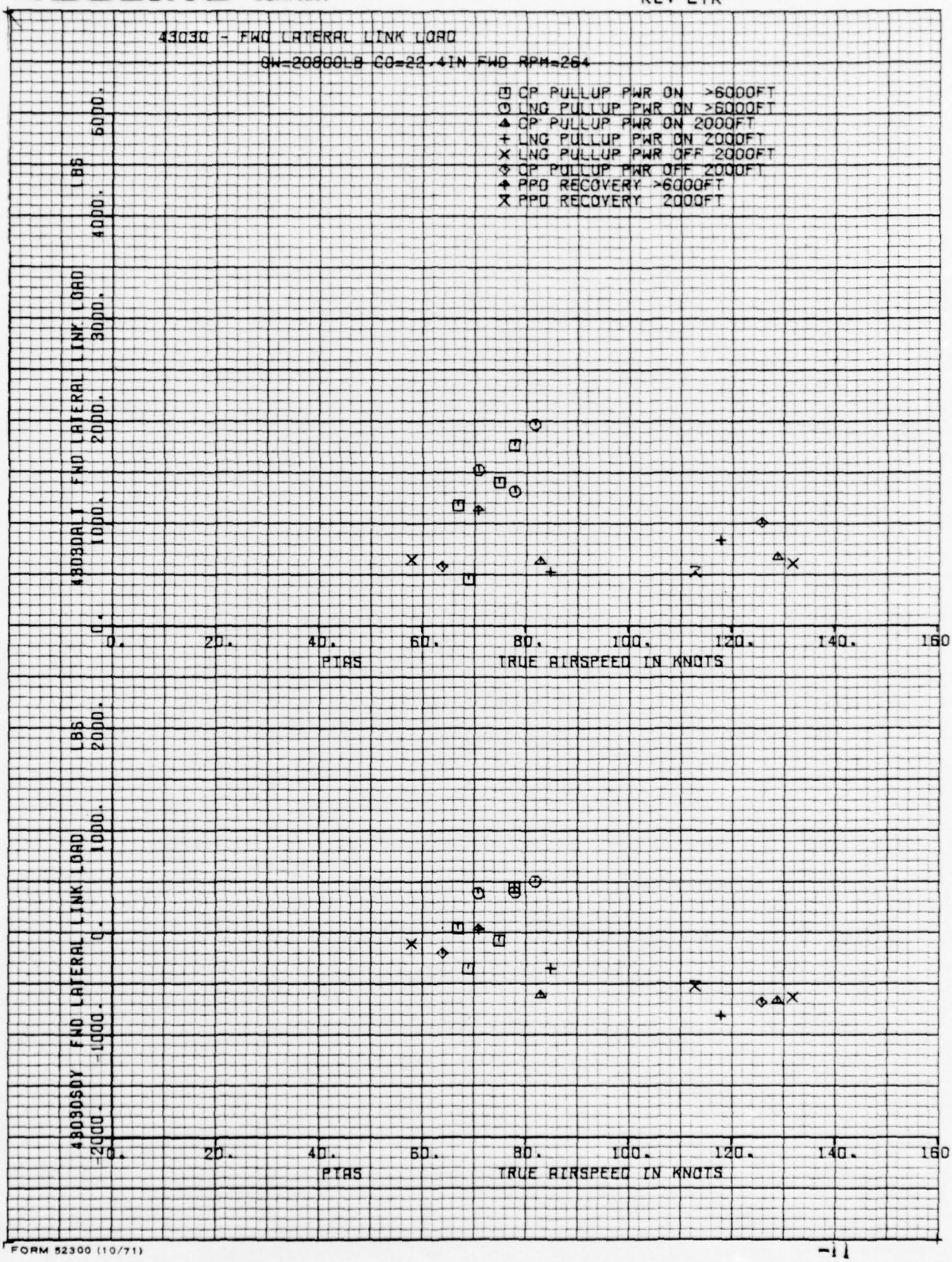
4.8 Forward Lateral Link

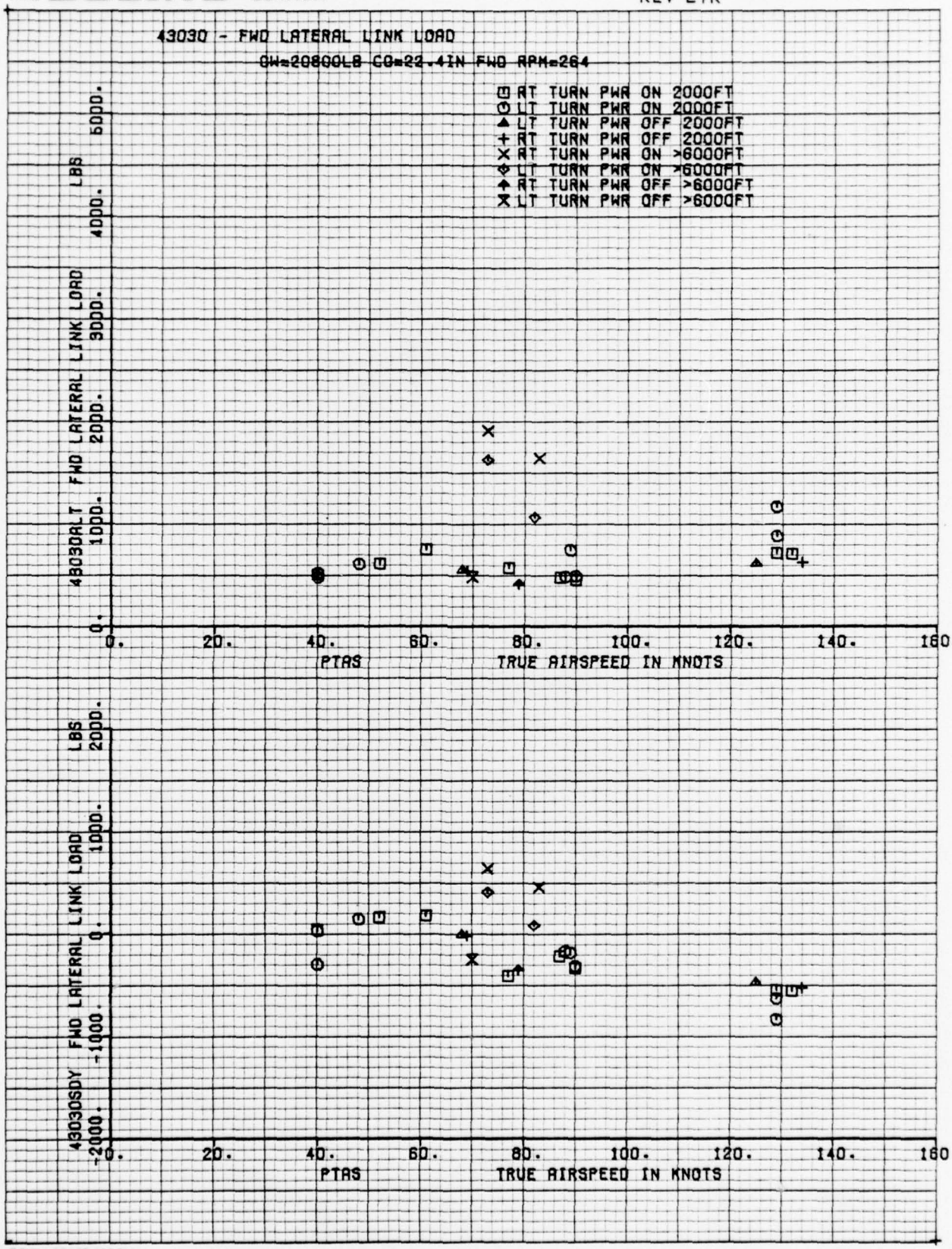
THE BOEING COMPANY



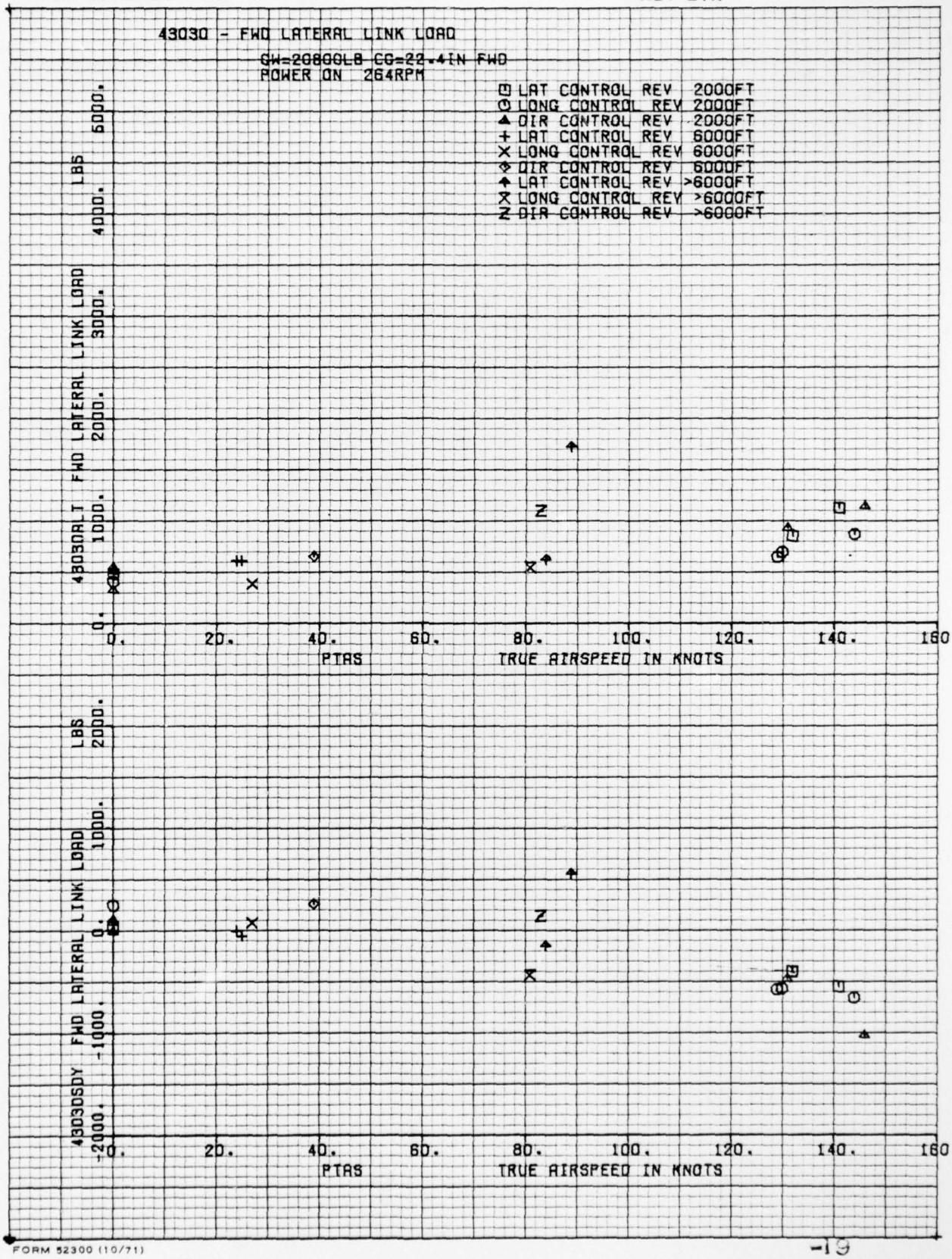
FORM 52300 (10/71)


43030 - FWD LATERAL LINK LOAD
GW=206000LB CG=22.4IN FWD
HO=ABOVE 6000FT RPM=264
+ FLT 115 LEVEL FLT
43030ALI FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43030BDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


43030 - FWD LATERAL LINK LOAD
GW=208000LB CG=22.4IN FWD RPM=264
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 2000FT
LNG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
PPD RECOVERY >6000FT
PPD RECOVERY 2000FT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS
TRUE AIRSPEED IN KNOTS

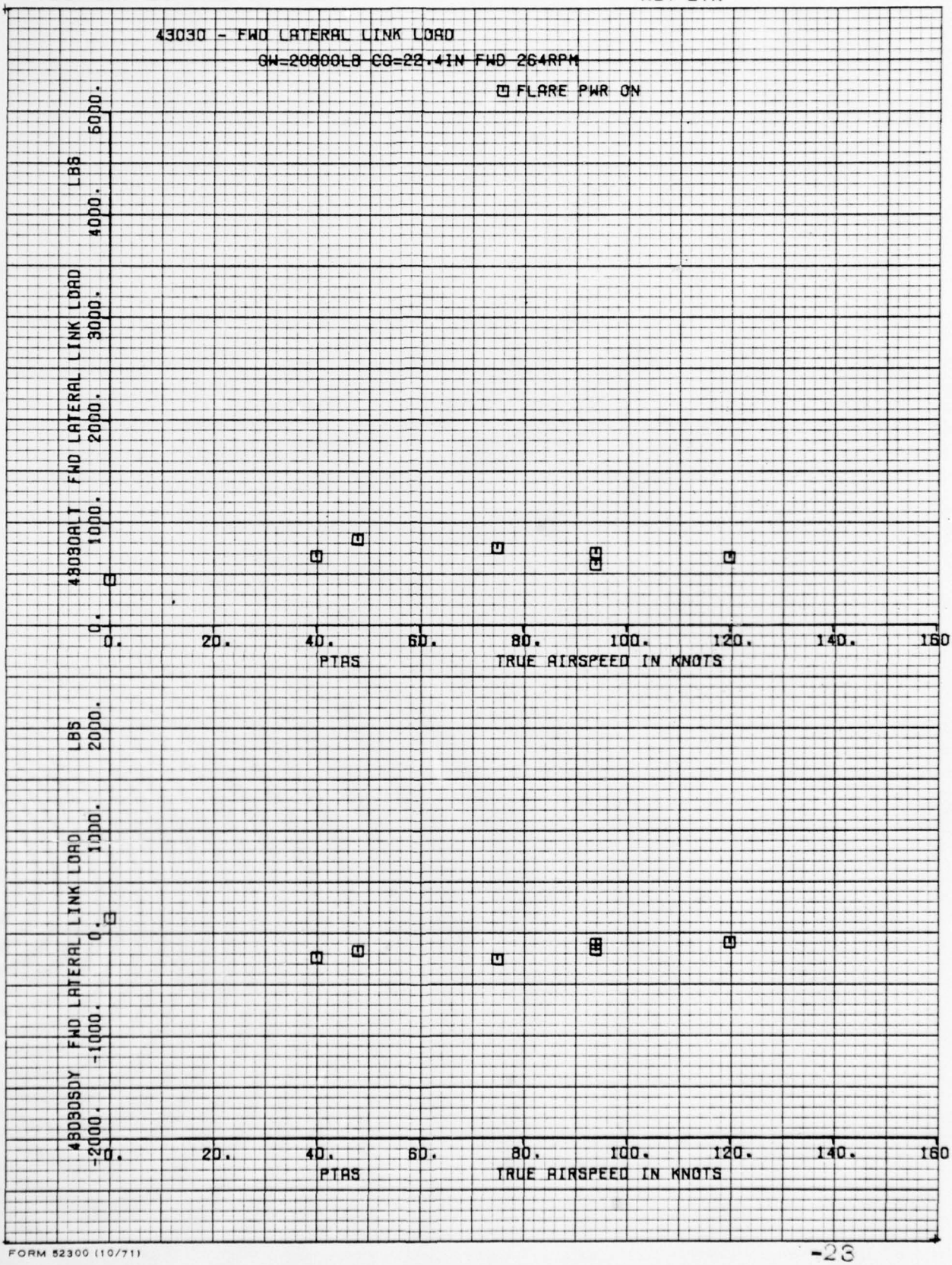

43030 - FWD LATERAL LINK LOAD
GW=208000LB CG=22.4IN FWD RPM=264
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
43030ALT FWD LATERAL LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

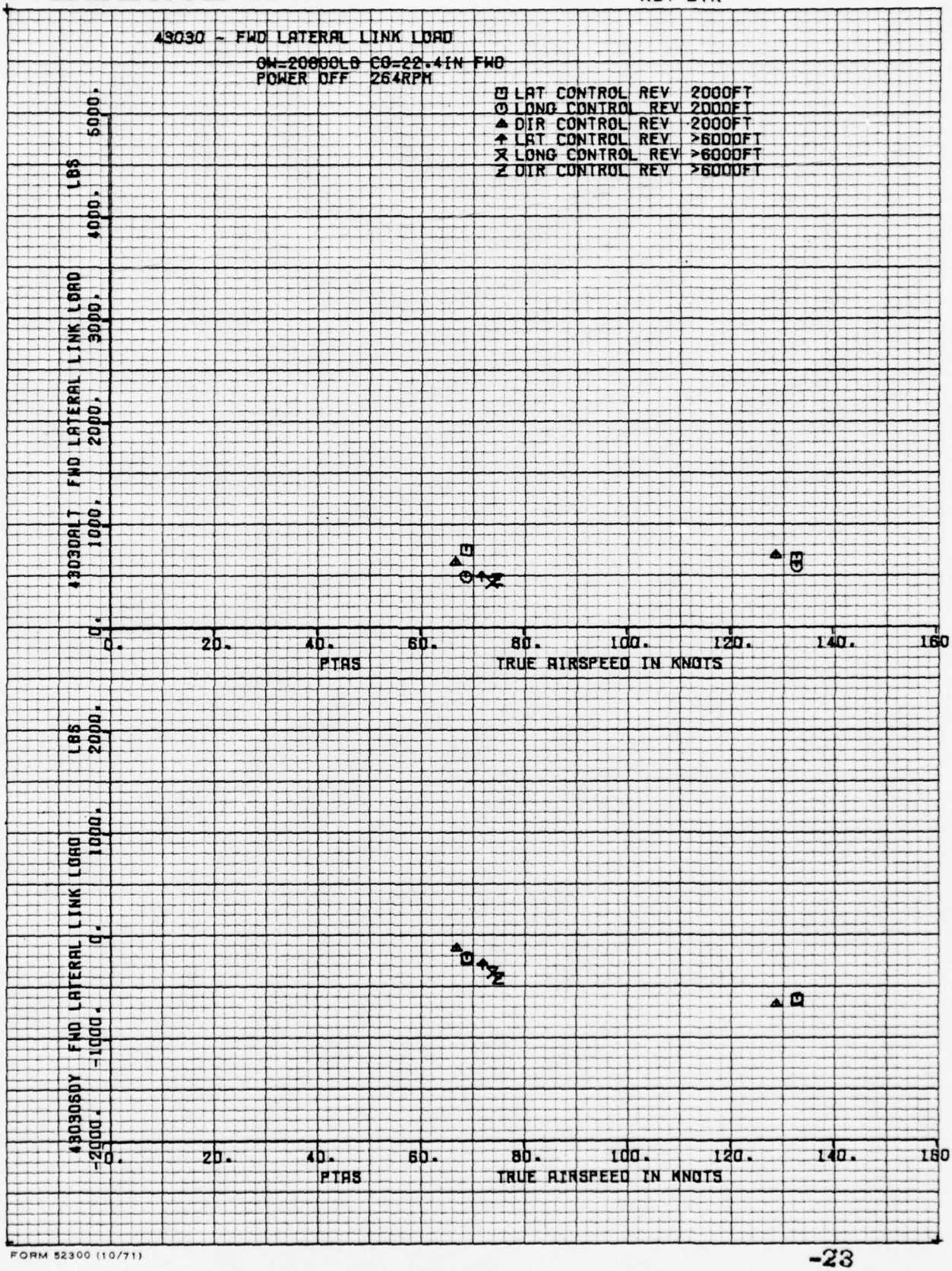


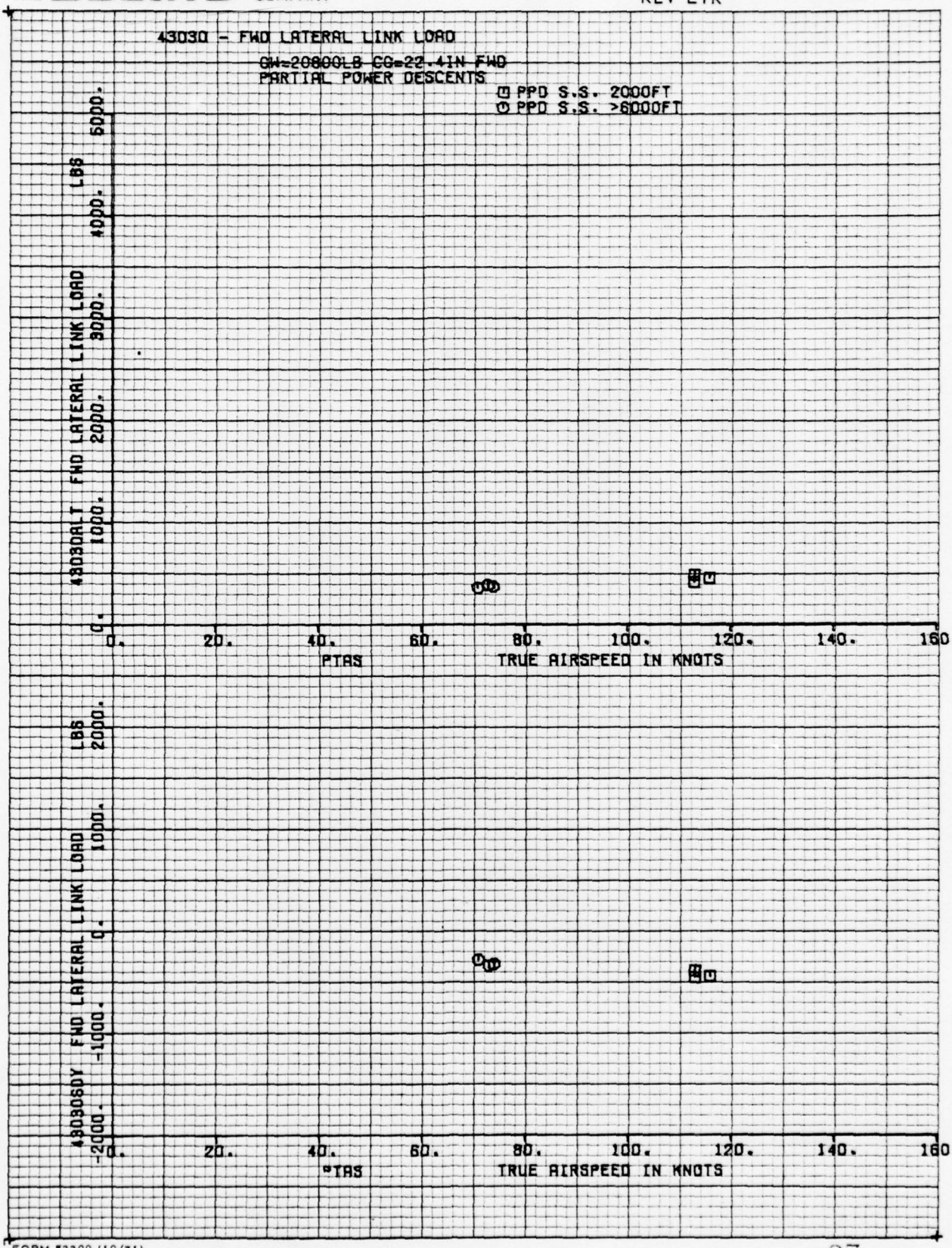
FORM 52300 (10/71)

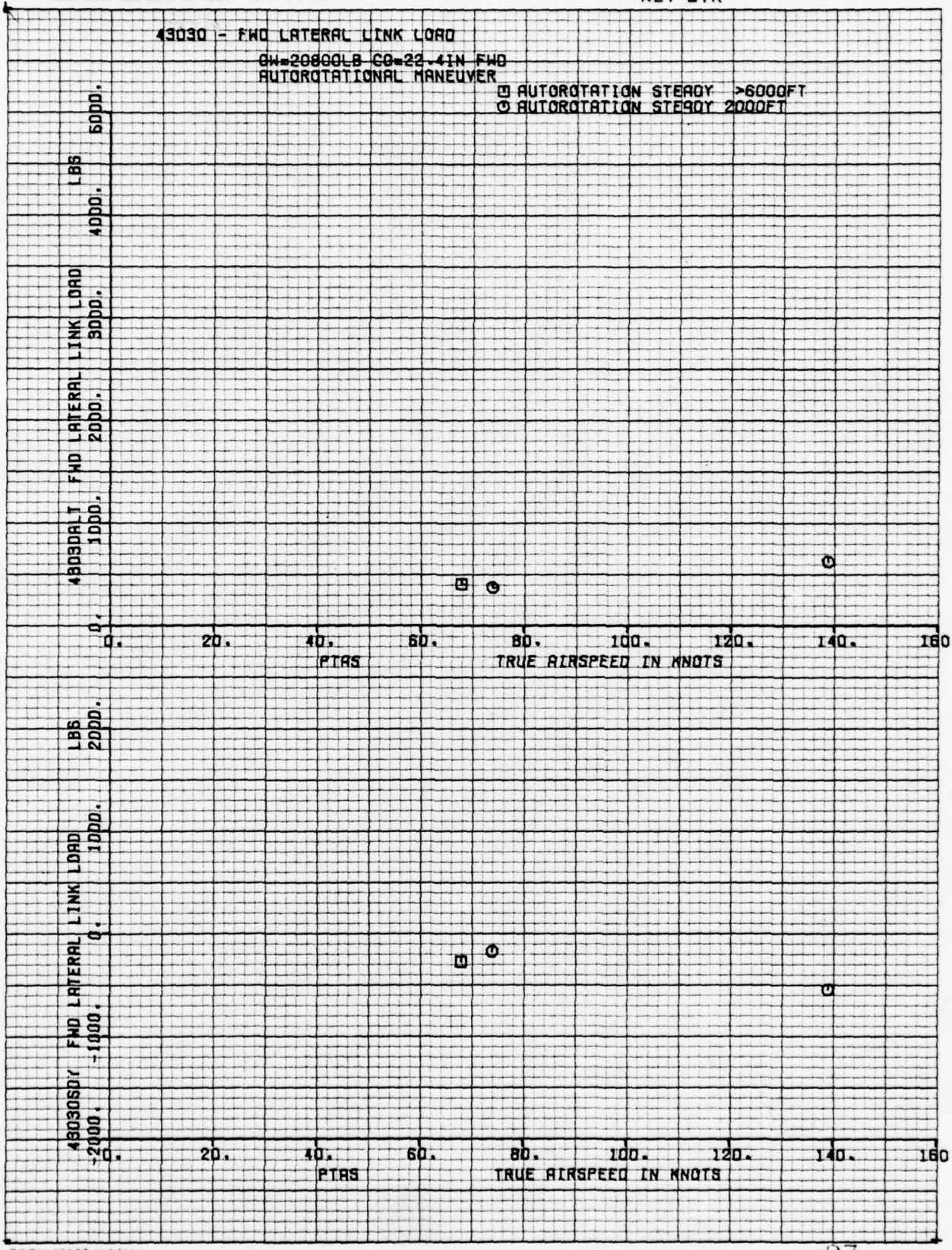
THE BOEING COMPANY

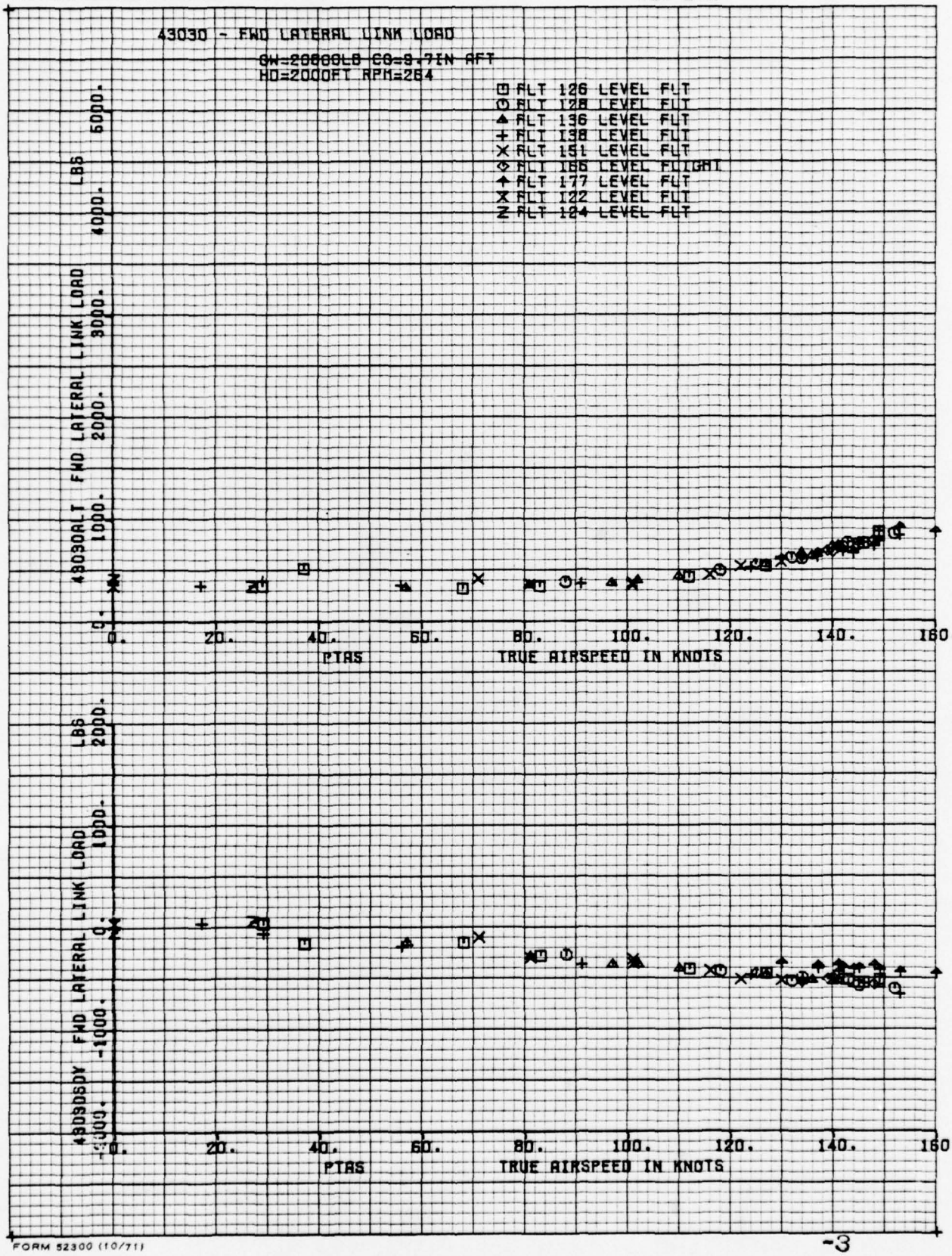


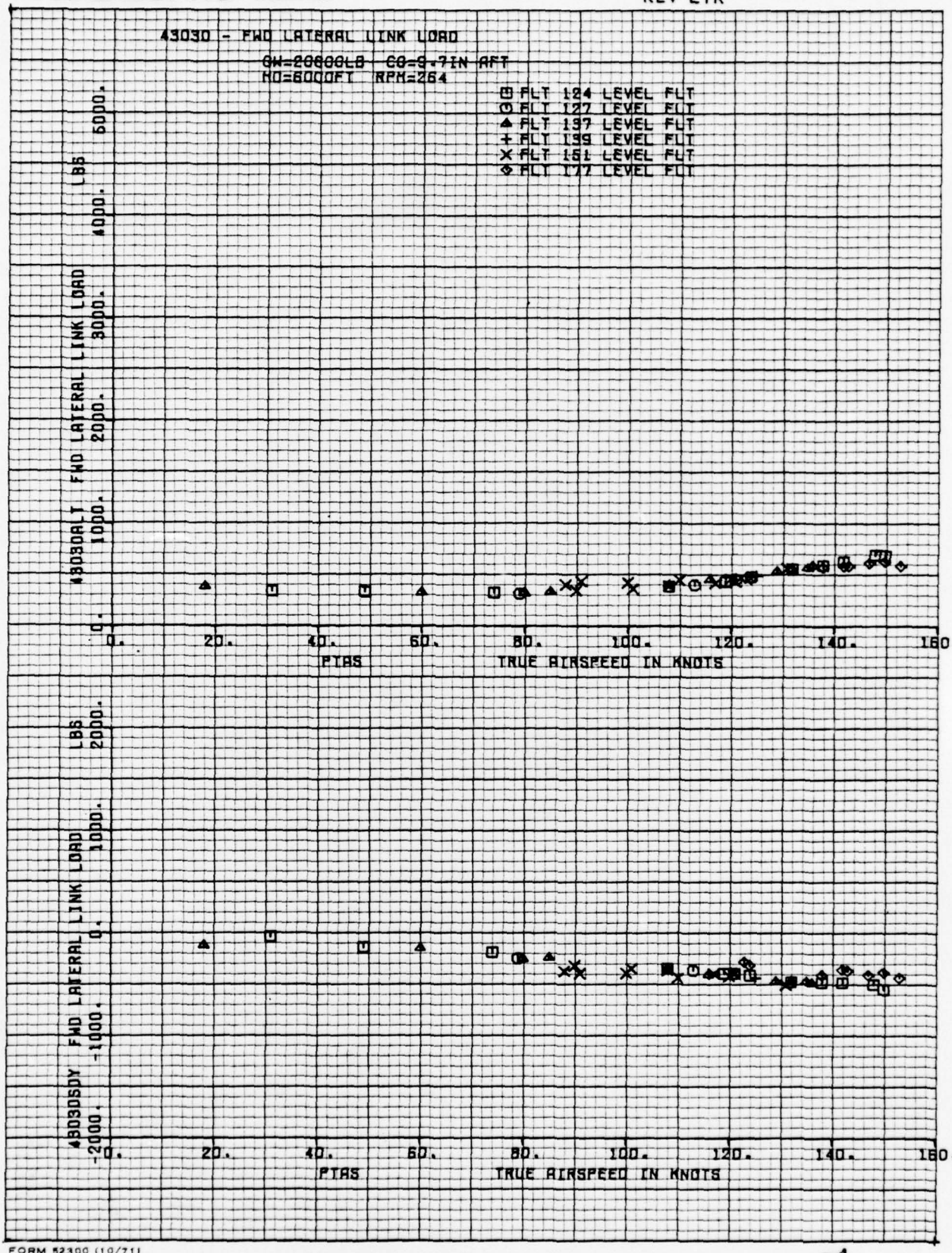
FORM 52300 (10/71)

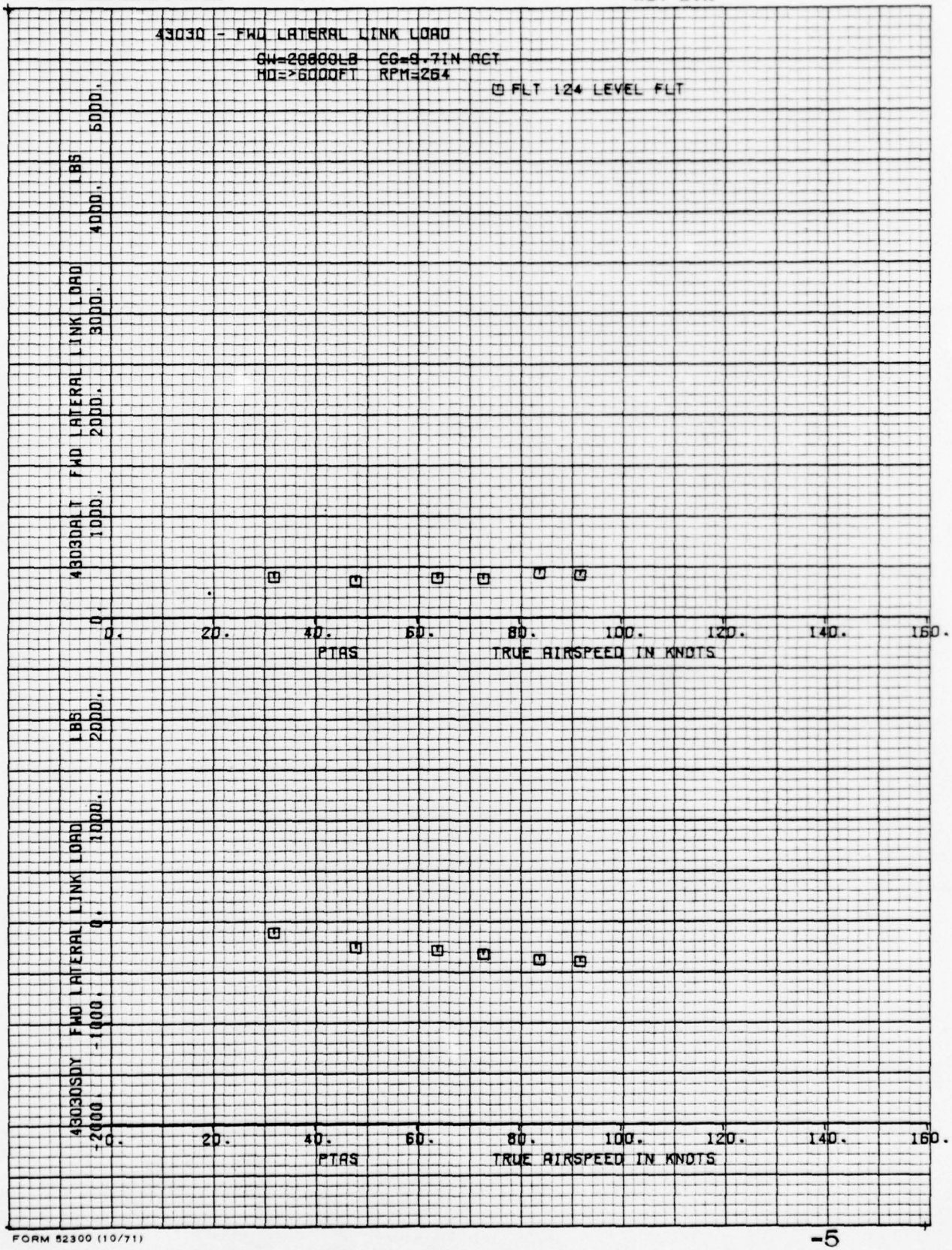

43030 - FWD LATERAL LINK LOAD
GW=20000LB CG=22.4IN FWD
POWER OFF 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43030ALT FWD LATERAL LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


43030 - FWD LATERAL LINK LOAD
GW=208000LB CG=22.41N FWD
PARTIAL POWER DESCENTS
PPD S.S. 2000FT
PPD S.S. >6000FT
43030ALT FWD LATERAL LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

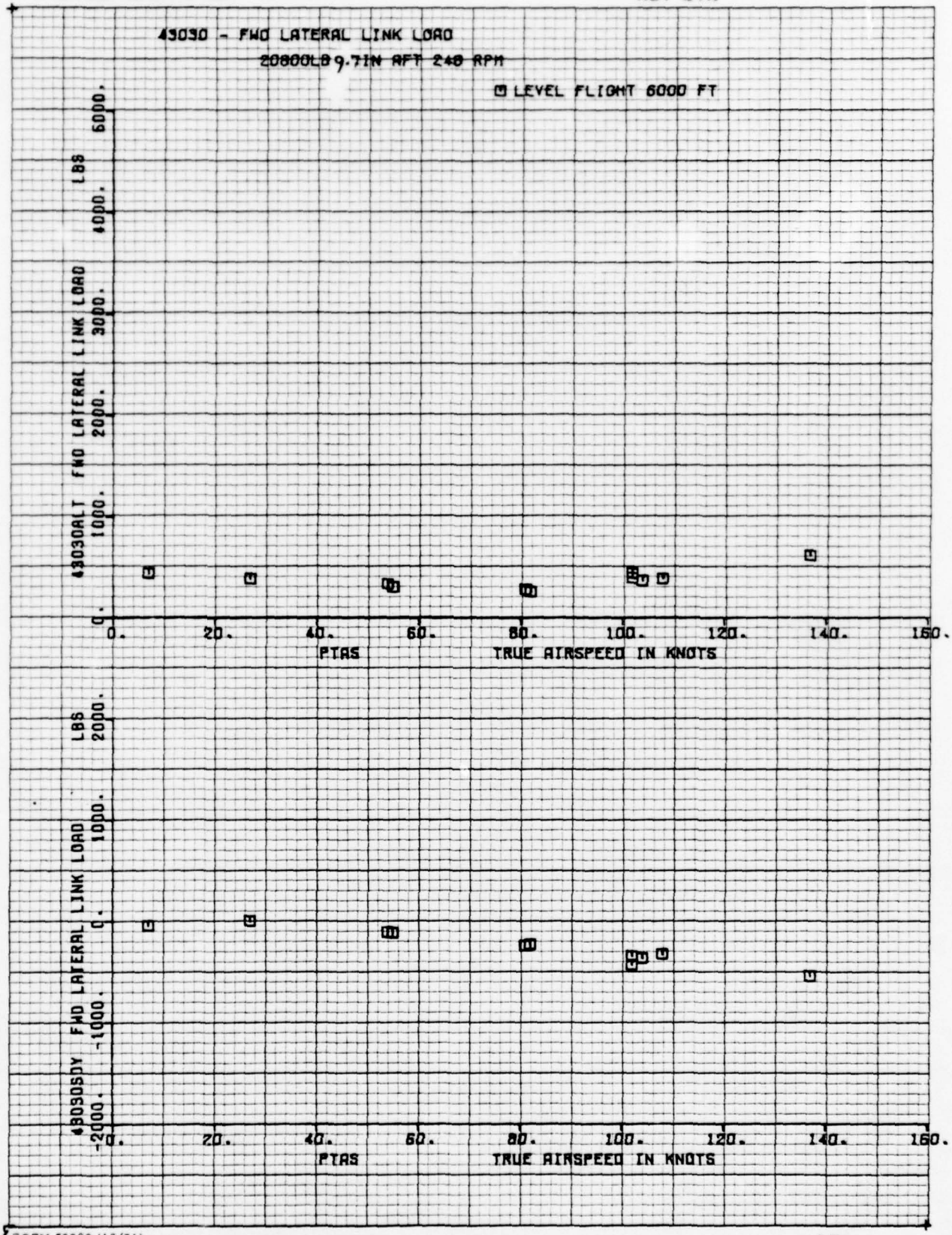

43030 - FWD LATERAL LINK LOAD
GW=20800LB CG=22.41N FWD
AUTOROTATIONAL MANEUVER
AUTOROTATION STEADY >6000FT
AUTOROTATION STEADY 2000FT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS
43030SDR FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS

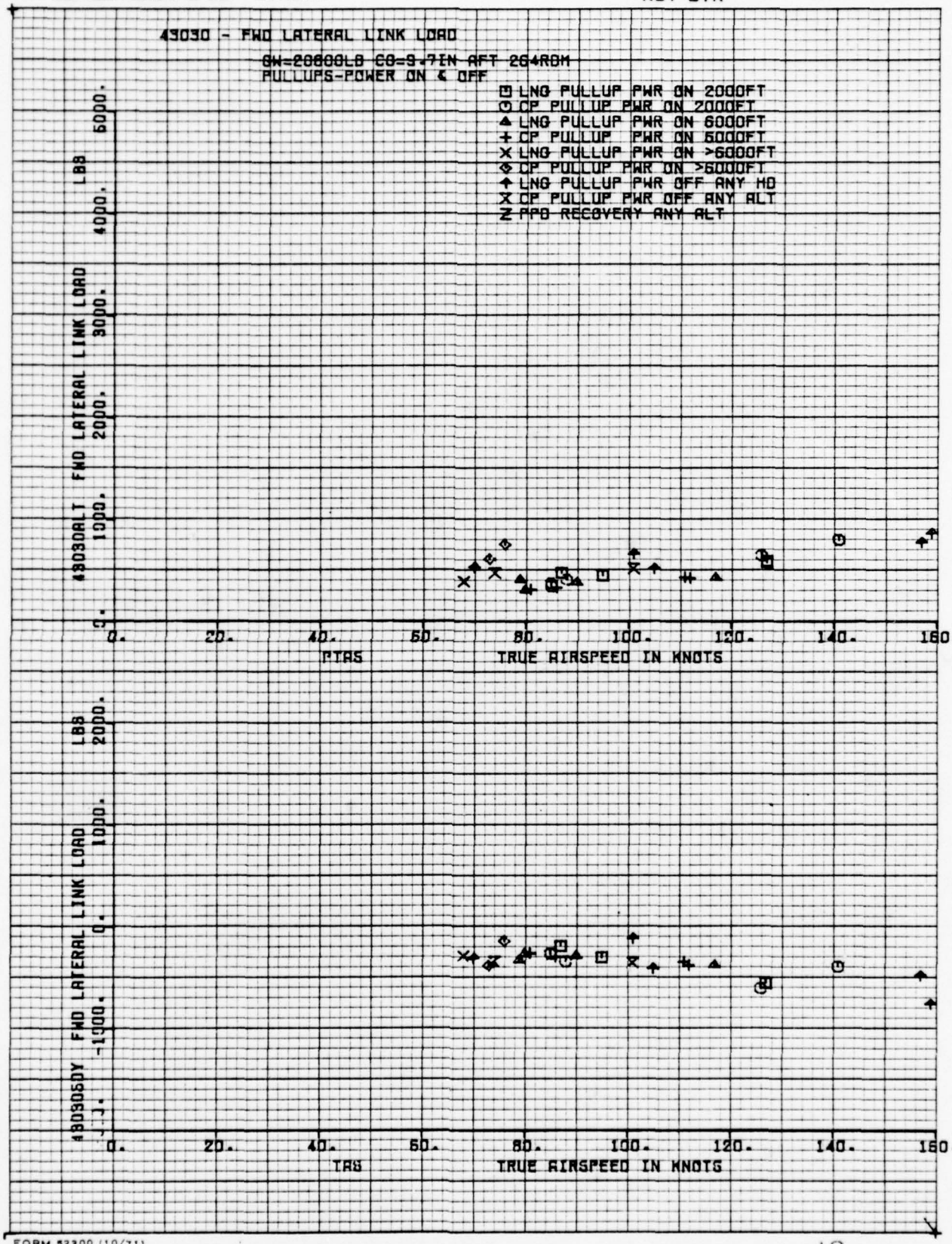

43030 - FWD LATERAL LINK LOAD
GW=20000LB CG=9.7IN AFT
HO=2000FT RPM=264
FLT 126 LEVEL FLT
FLT 128 LEVEL FLT
FLT 136 LEVEL FLT
FLT 138 LEVEL FLT
FLT 151 LEVEL FLT
FLT 166 LEVEL FLIGHT
FLT 177 LEVEL FLT
FLT 122 LEVEL FLT
FLT 124 LEVEL FLT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030DY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


43030 - FWD LATERAL LINK LOAD
GW=206000LB CG=9.7IN AFT
HO=6000FT RPM=264
FLT 124 LEVEL FLT
FLT 127 LEVEL FLT
FLT 137 LEVEL FLT
FLT 139 LEVEL FLT
FLT 161 LEVEL FLT
FLT 172 LEVEL FLT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS TRUE AIRSPEED IN KNOTS

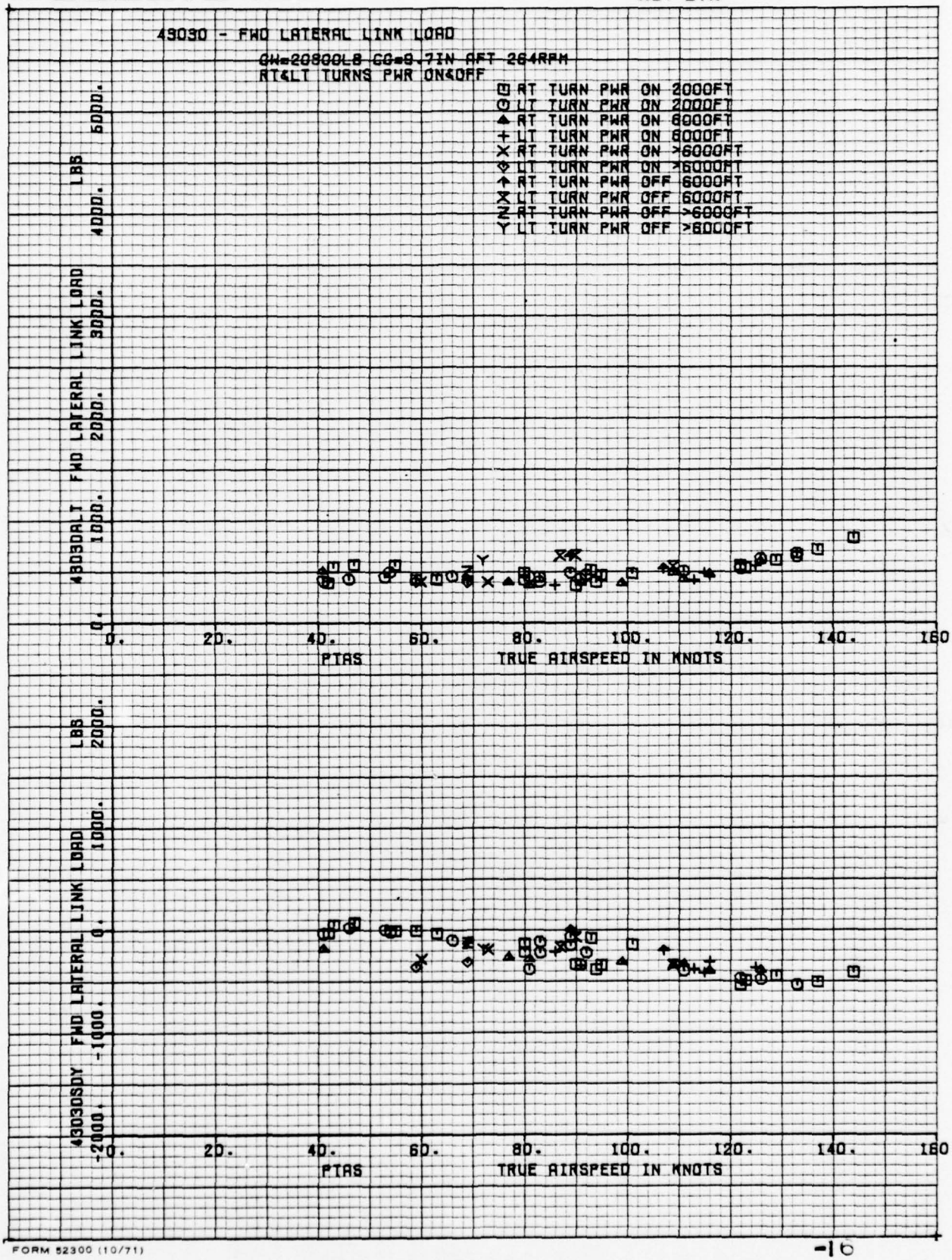

43030 - FWD LATERAL LINK LOAD
GW=208000LB CG=9.7IN ACT
HD=>6000FT RPM=264
FLT 124 LEVEL FLT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

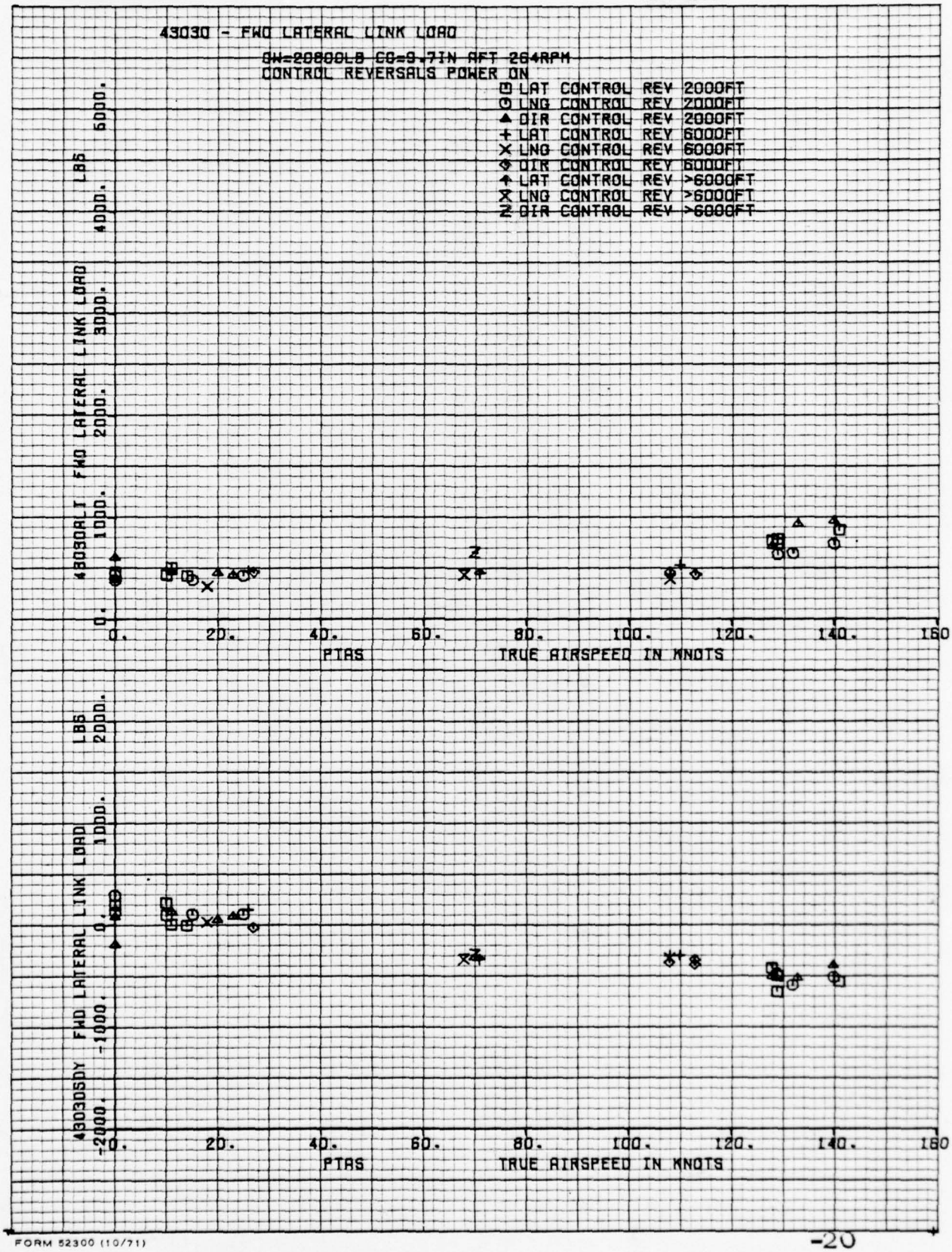



43030 - FWD LATERAL LINK LOAD
GW=206000LB CG=9.7IN AFT 2G4RDM
PULLUPS-POWER ON & OFF
LNG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 6000FT
CP PULLUP PWR ON 6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR OFF ANY HD
CP PULLUP PWR OFF ANY ALT
PPD RECOVERY ANY ALT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS
43030DY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
TAS
TRUE AIRSPEED IN KNOTS

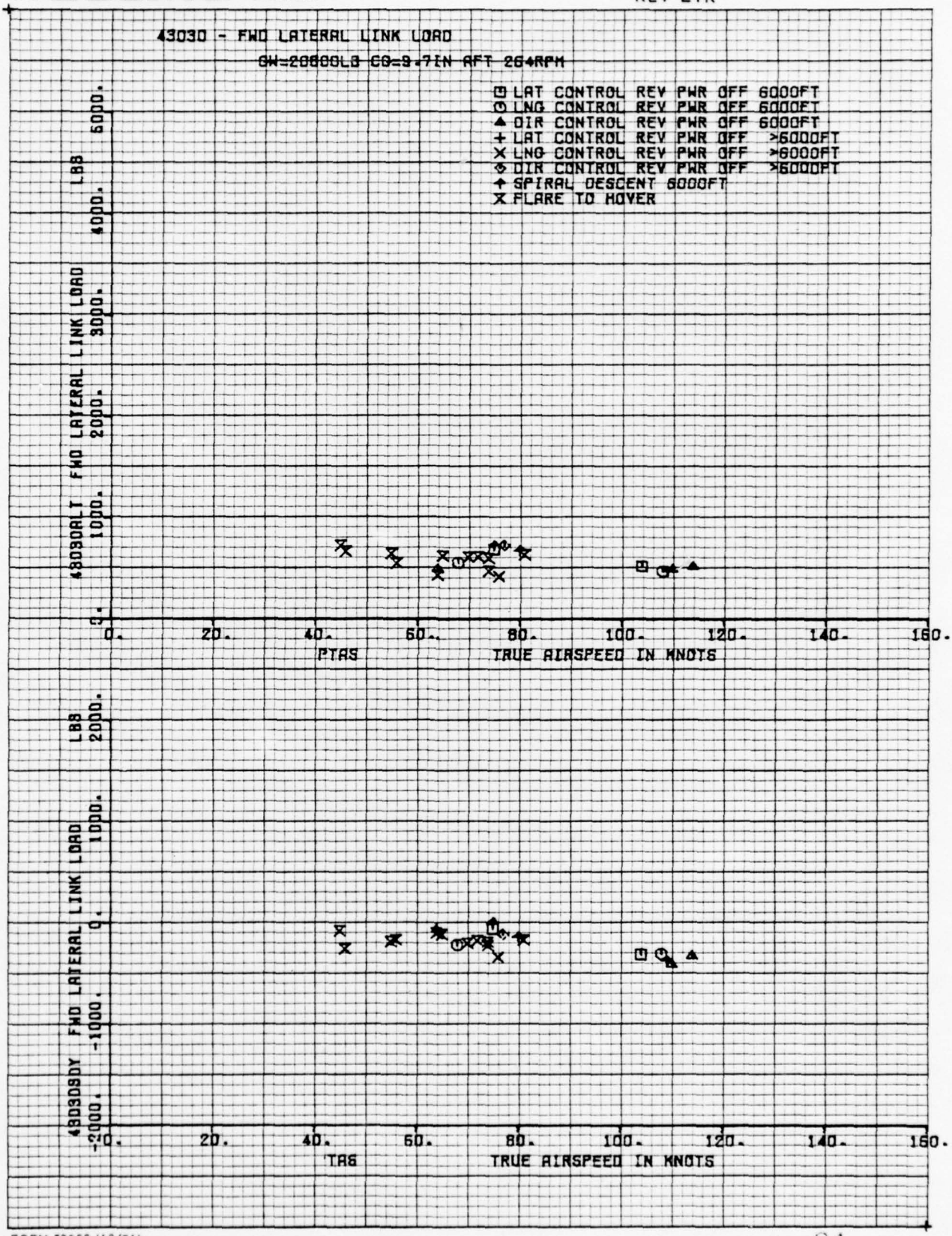
THE BOEING COMPANY



FORM 52300 (10/71)

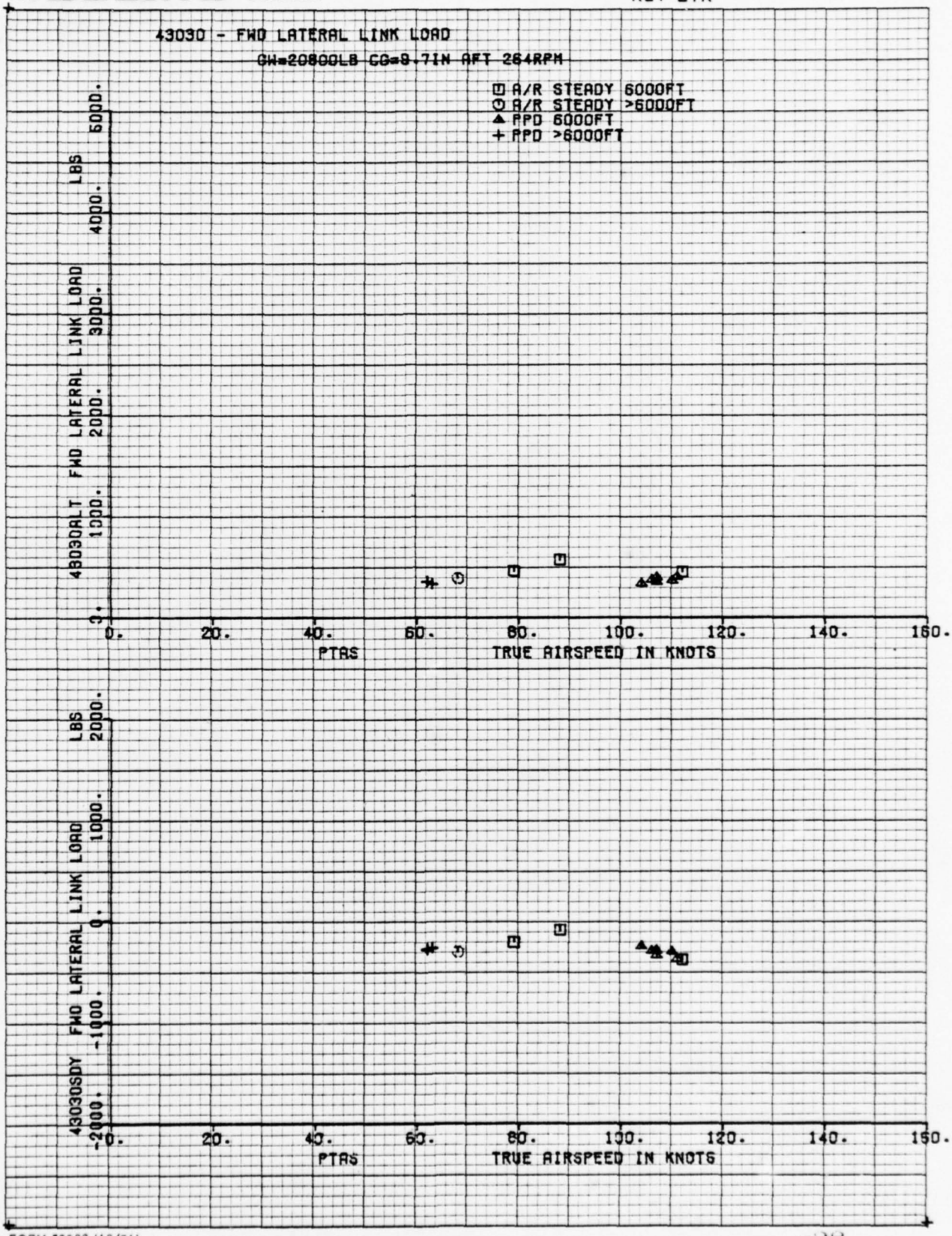

43030 - FWD LATERAL LINK LOAD
GW=208000LB CG=9.7IN AFT 264RPM
CONTROL REVERSALS POWER ON
LAT CONTROL REV 2000FT
LNG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LNG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LNG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43030ALI FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



FORM 52300 (10/71)

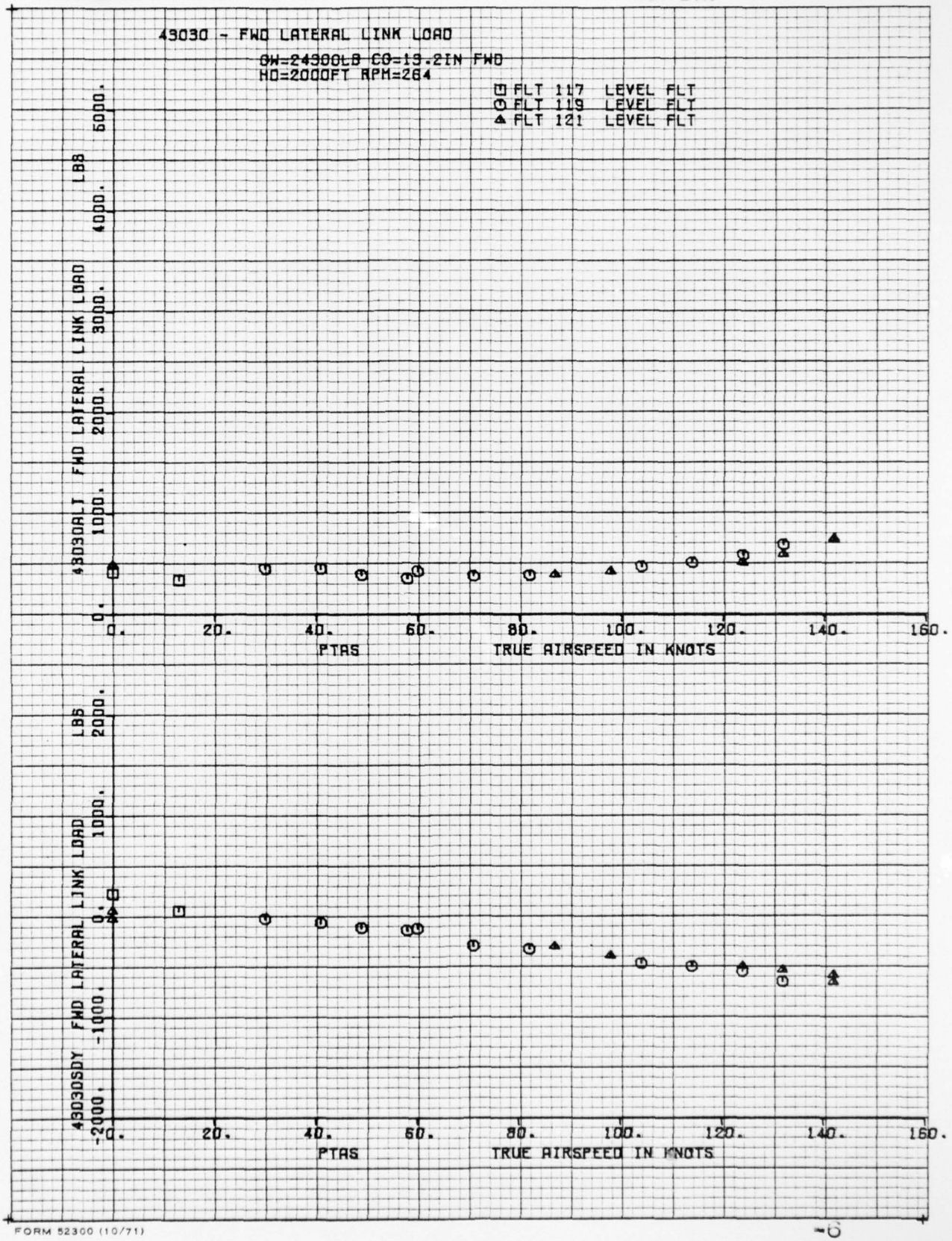
THE BOEING COMPANY



FORM 52300 (10/71)

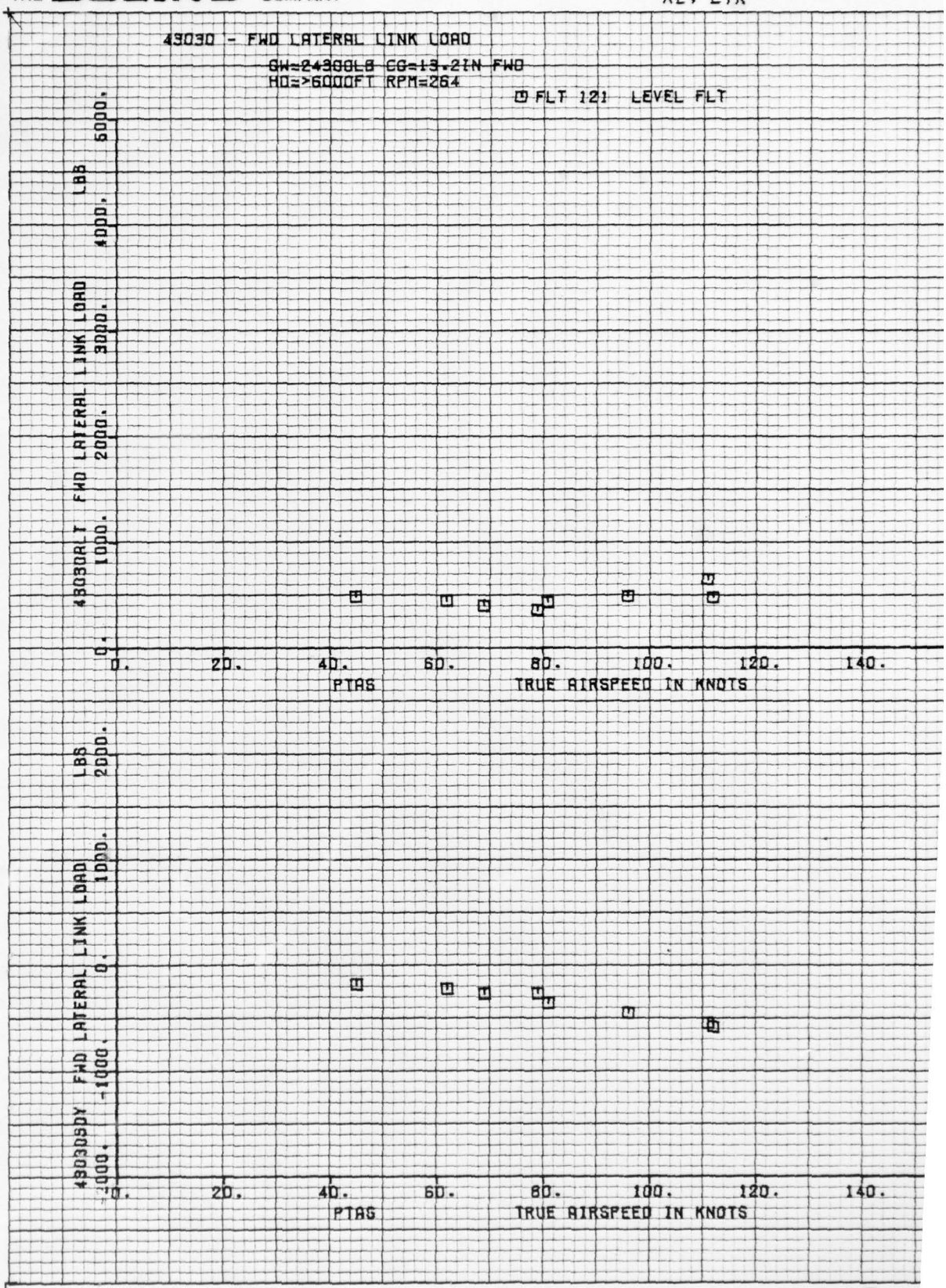
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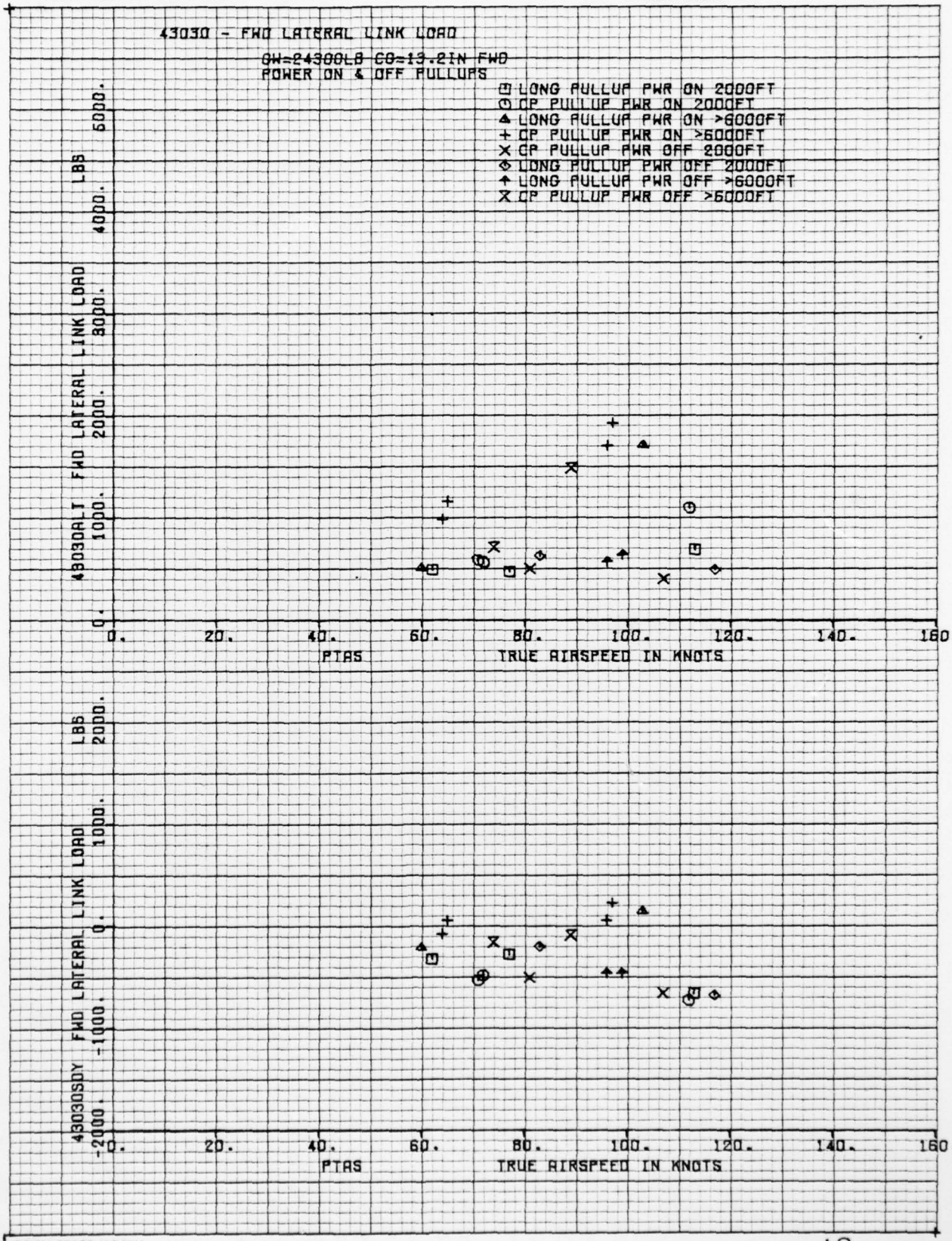
THE BOEING COMPANY

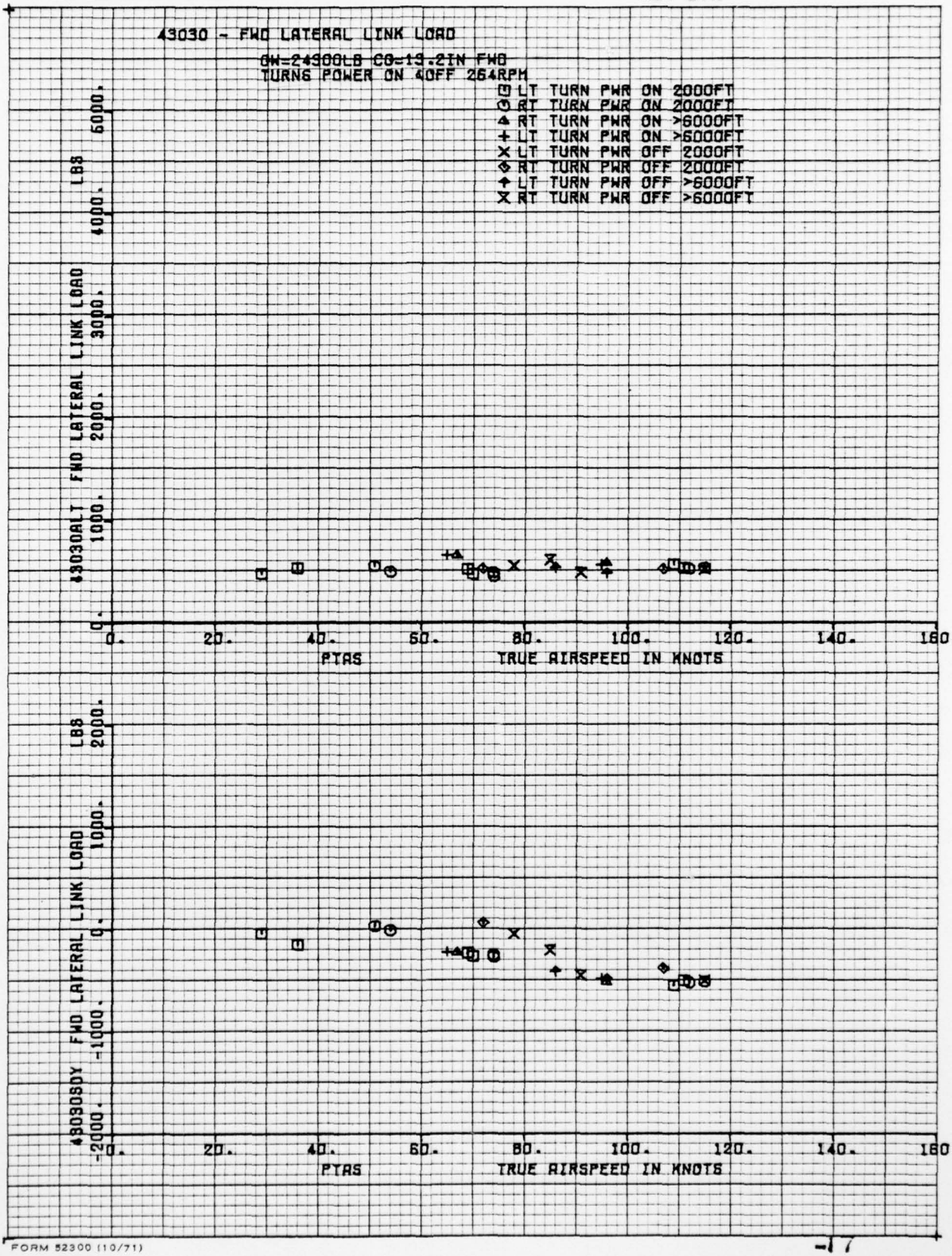


FORM 52300 (10/71)

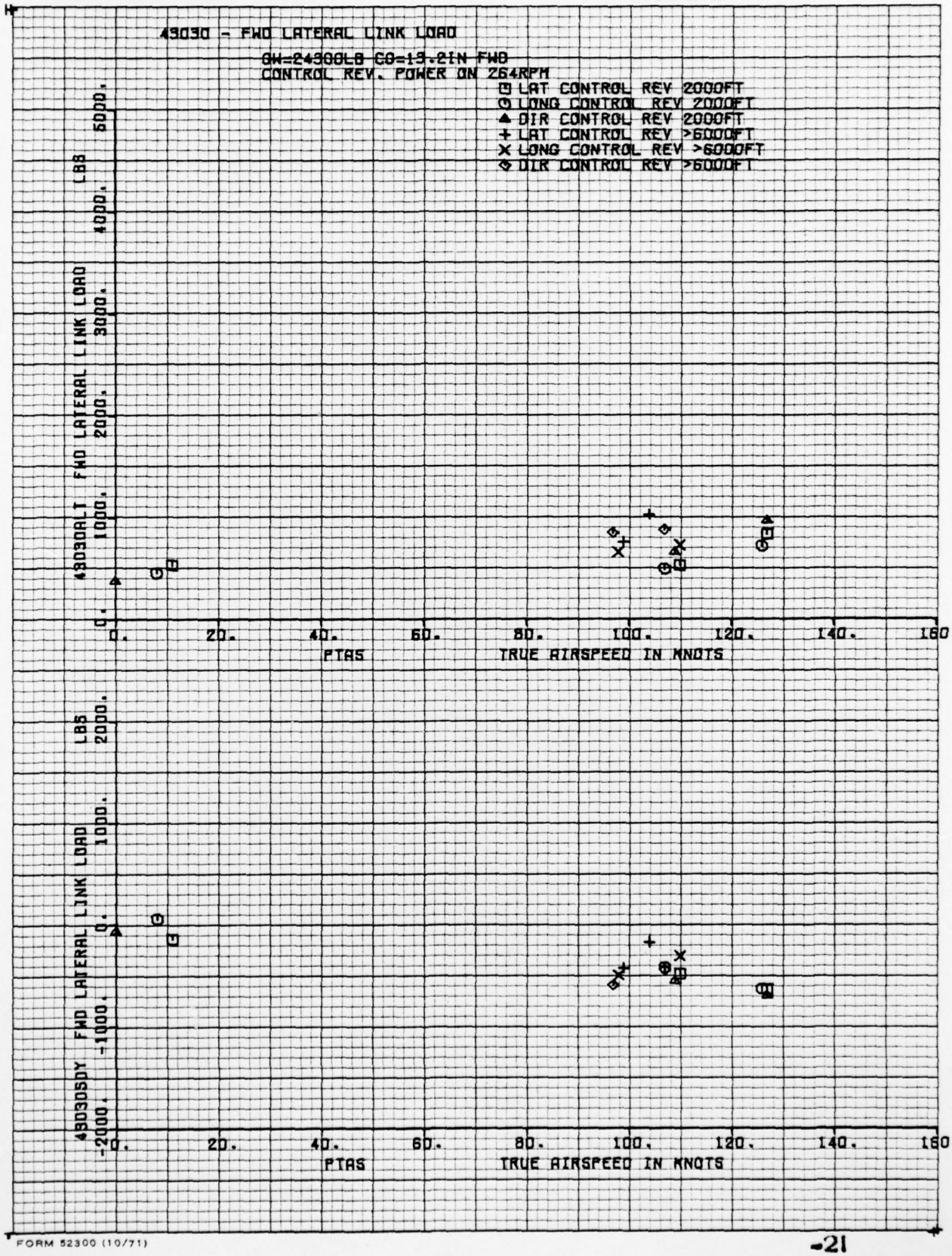
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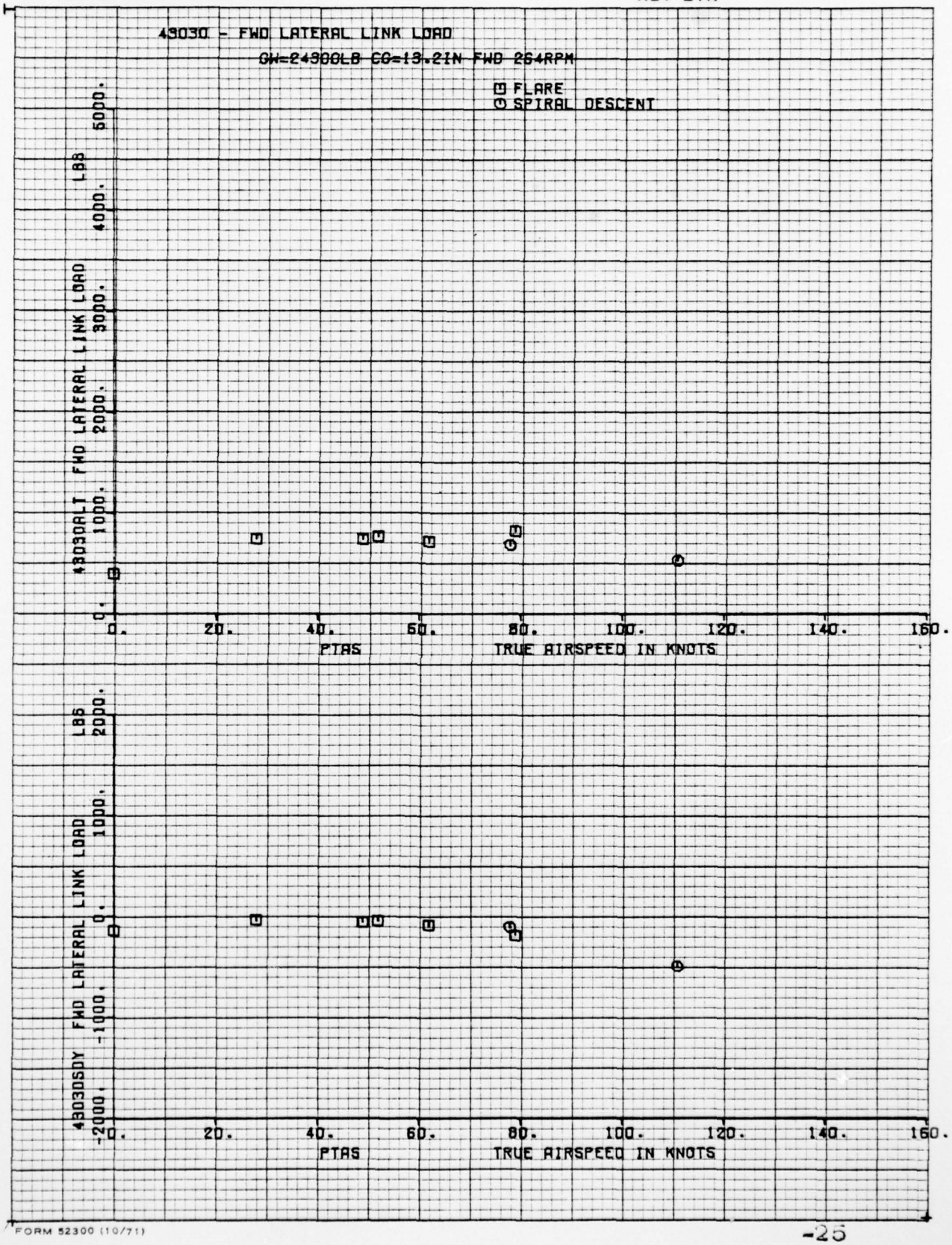

43030 - FWD LATERAL LINK LOAD
GW=243000LB CG=13.2IN FWD
HO=>6000FT RPM=264
FLT 121 LEVEL FLT
43030ALT FWD LATERAL LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
PIAS
TRUE AIRSPEED IN KNOTS
43030DY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
PIAS
TRUE AIRSPEED IN KNOTS

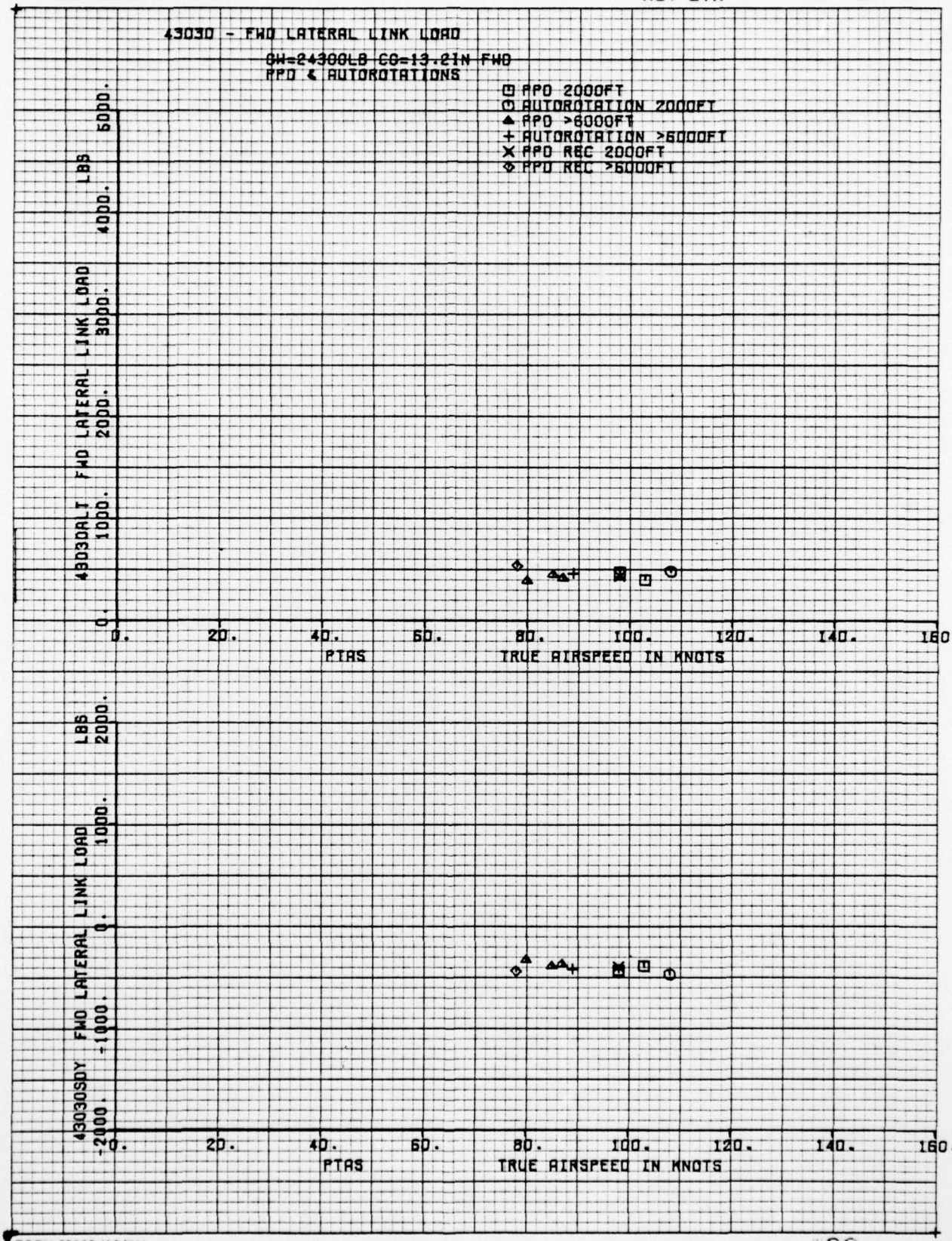

43030 - FWD LATERAL LINK LOAD
GW=243000LB CG=13.2IN FWD
POWER ON & OFF PULLUPS
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
CP PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
2000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

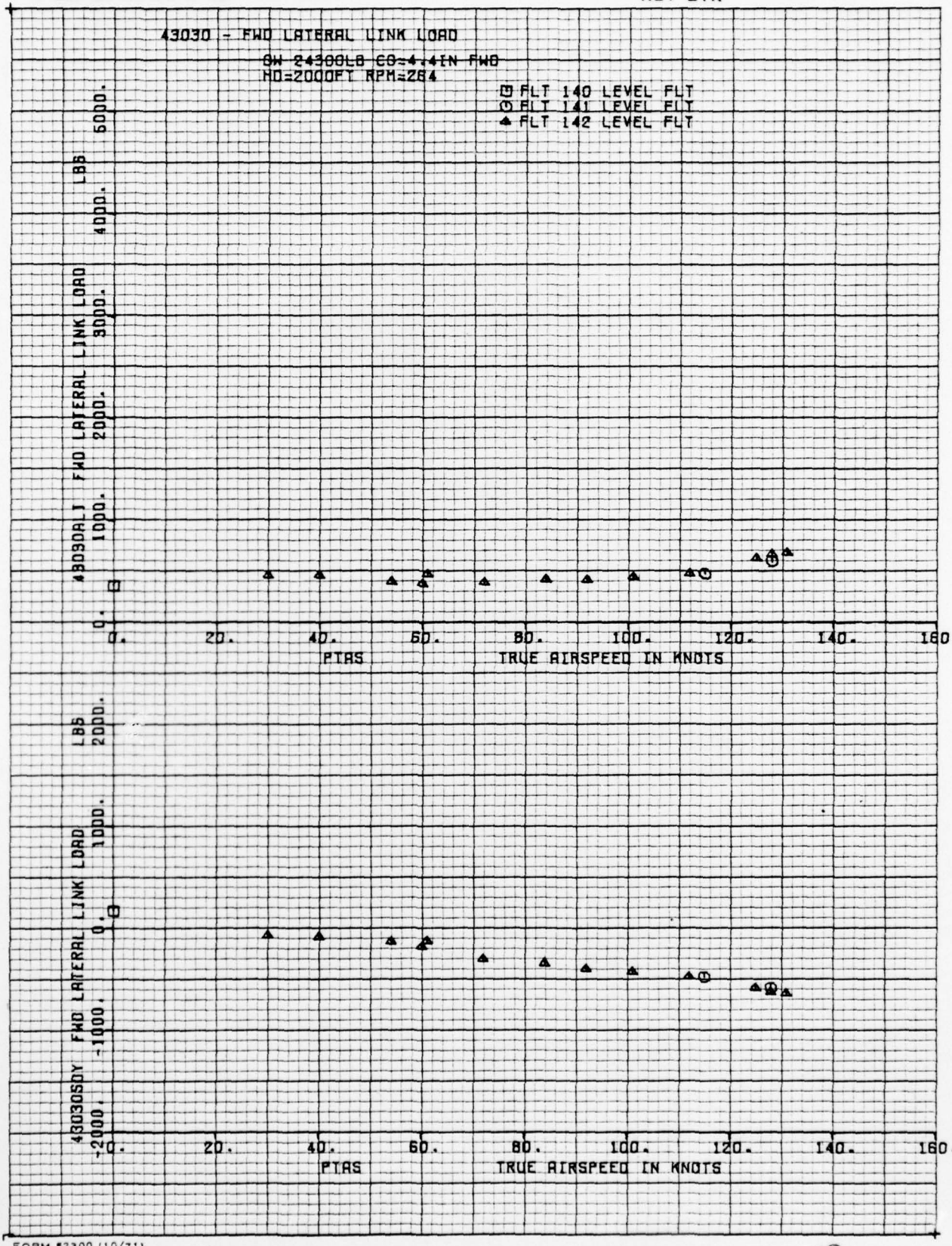


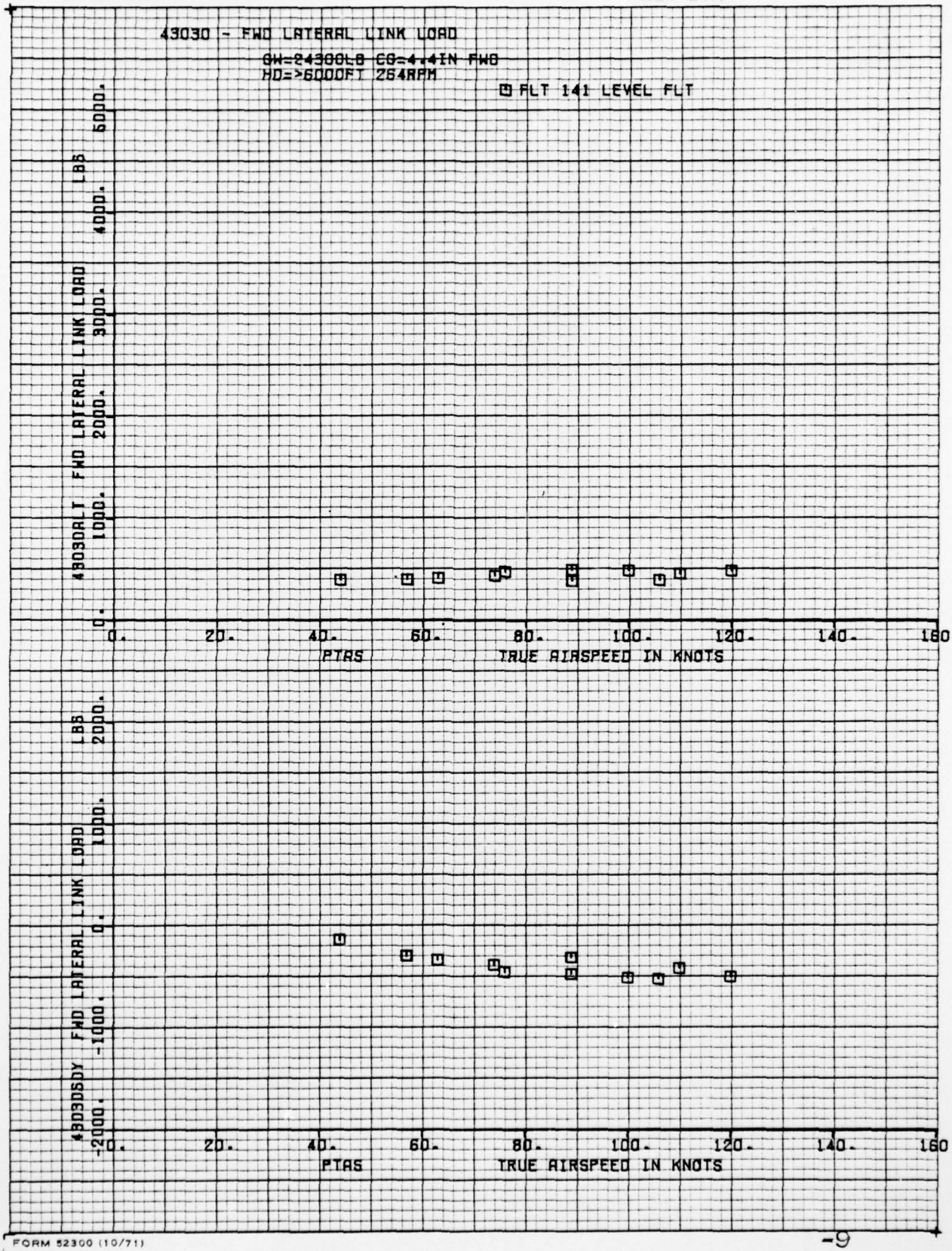
FORM 52300 (10/71)

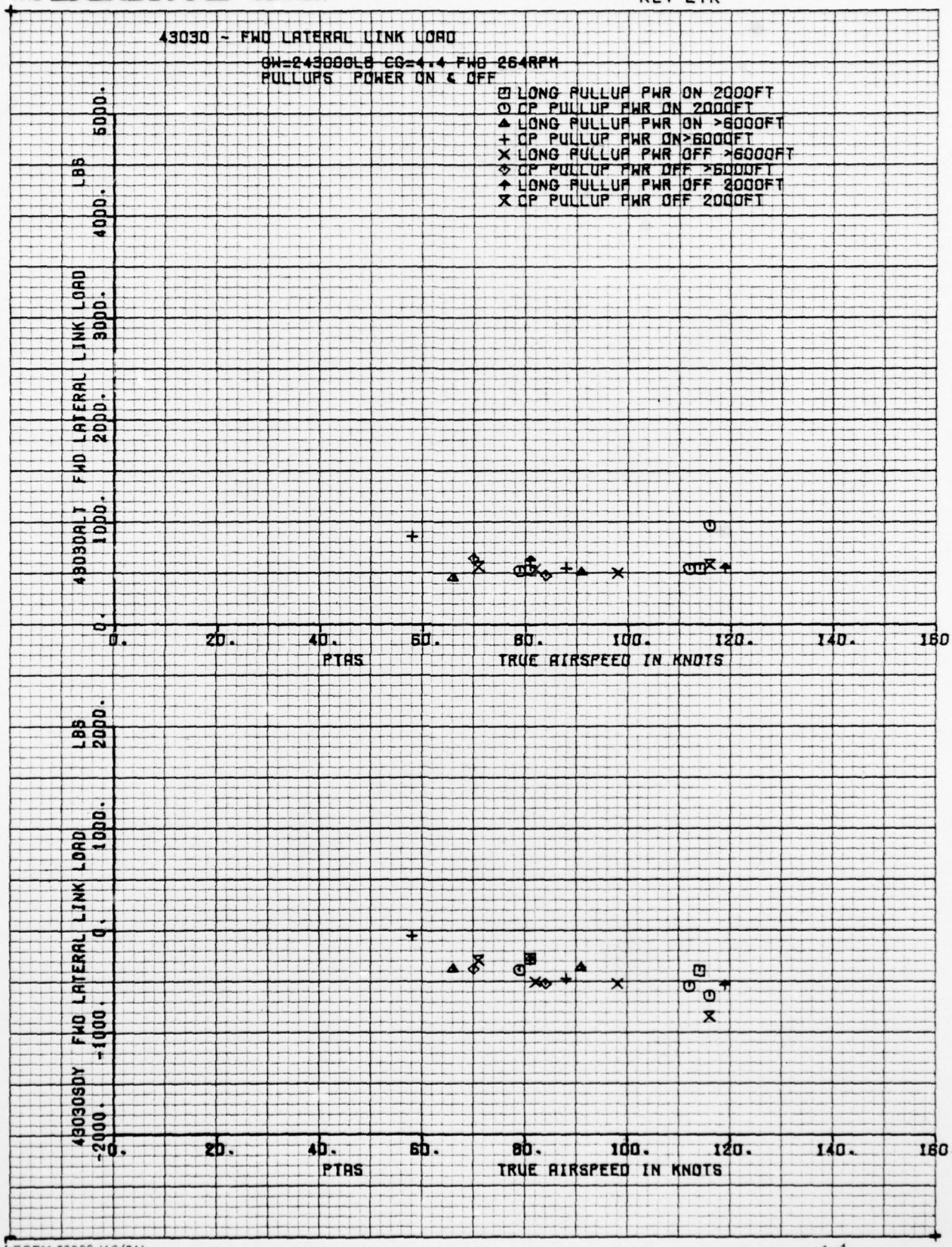

43030 - FWD LATERAL LINK LOAD
GW=243000LB CG=13.2IN FWD
CONTROL REV. POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43030ALI FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


43030 - FWD LATERAL LINK LOAD
GW=24300LB CG=13.2IN FWD 264RPM
FLARE
SPIRAL DESCENT
43030ALT FWD LATERAL LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

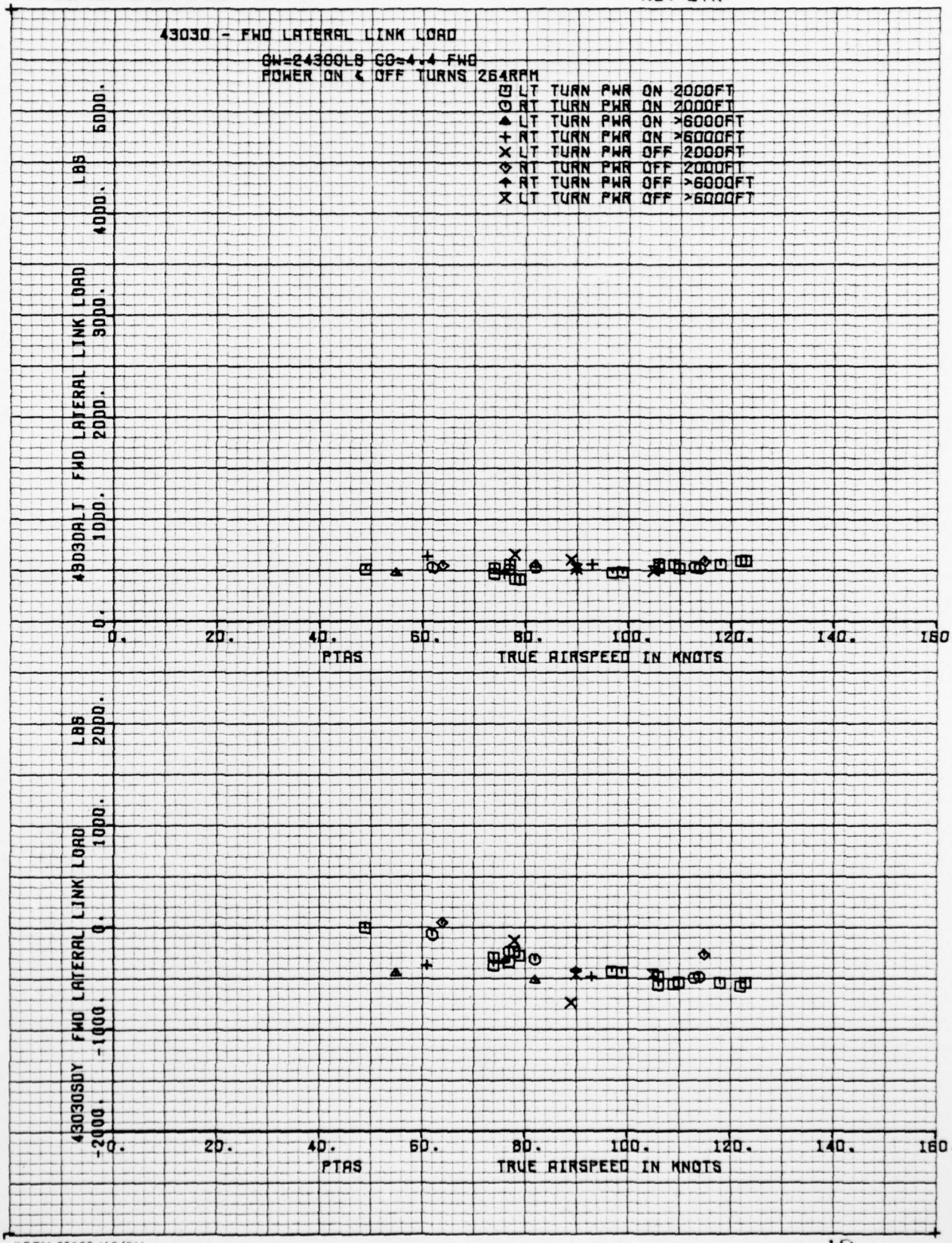

43030 - FWD LATERAL LINK LOAD
GW=24300LB CG=13.2IN FWD
RPD & AUTOROTATIONS
RPD 2000FT
AUTOROTATION 2000FT
RPD >6000FT
AUTOROTATION >6000FT
RPD REC 2000FT
RPD REC >6000FT
48030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


43030 - FWD LATERAL LINK LOAD
GW 244000LB CG=4.4IN FWD
HD=2000FT RPM=264
FLT 140 LEVEL FLT
FLT 141 LEVEL FLT
FLT 142 LEVEL FLT
43030ALJ FWD LATERAL LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

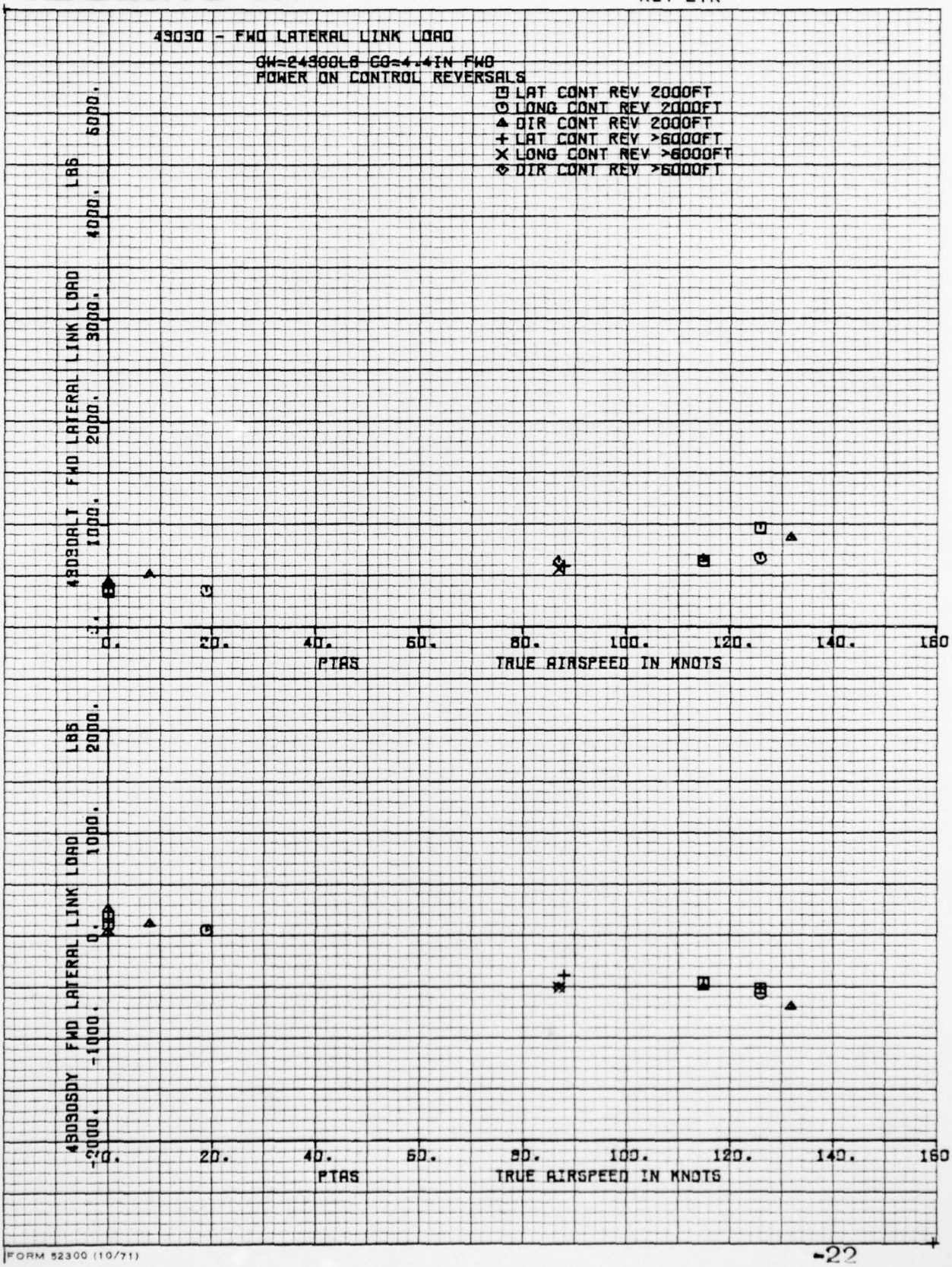

43030 - FWD LATERAL LINK LOAD
GW=24300LB CG=4.4IN FWD
HD=>6000FT 264RPM
FLT 141 LEVEL FLT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
43030DDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

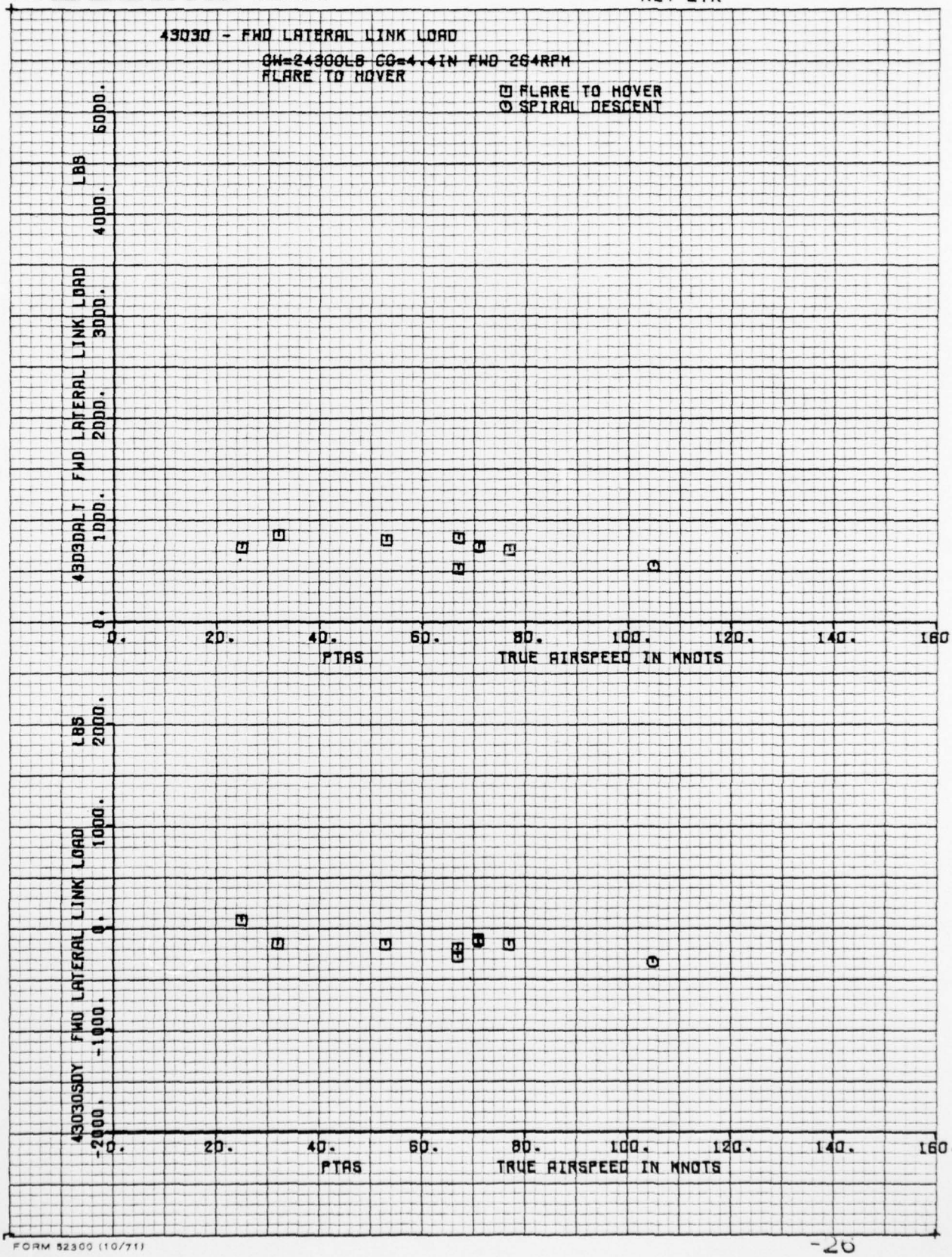

43030 - FWD LATERAL LINK LOAD
GW=243000LB CG=4.4 FWD 264RPM
PULLUPS POWER ON & OFF
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON>6000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
LONG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
43030ALT FWD LATERAL LINK LOAD LBS
6000.
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

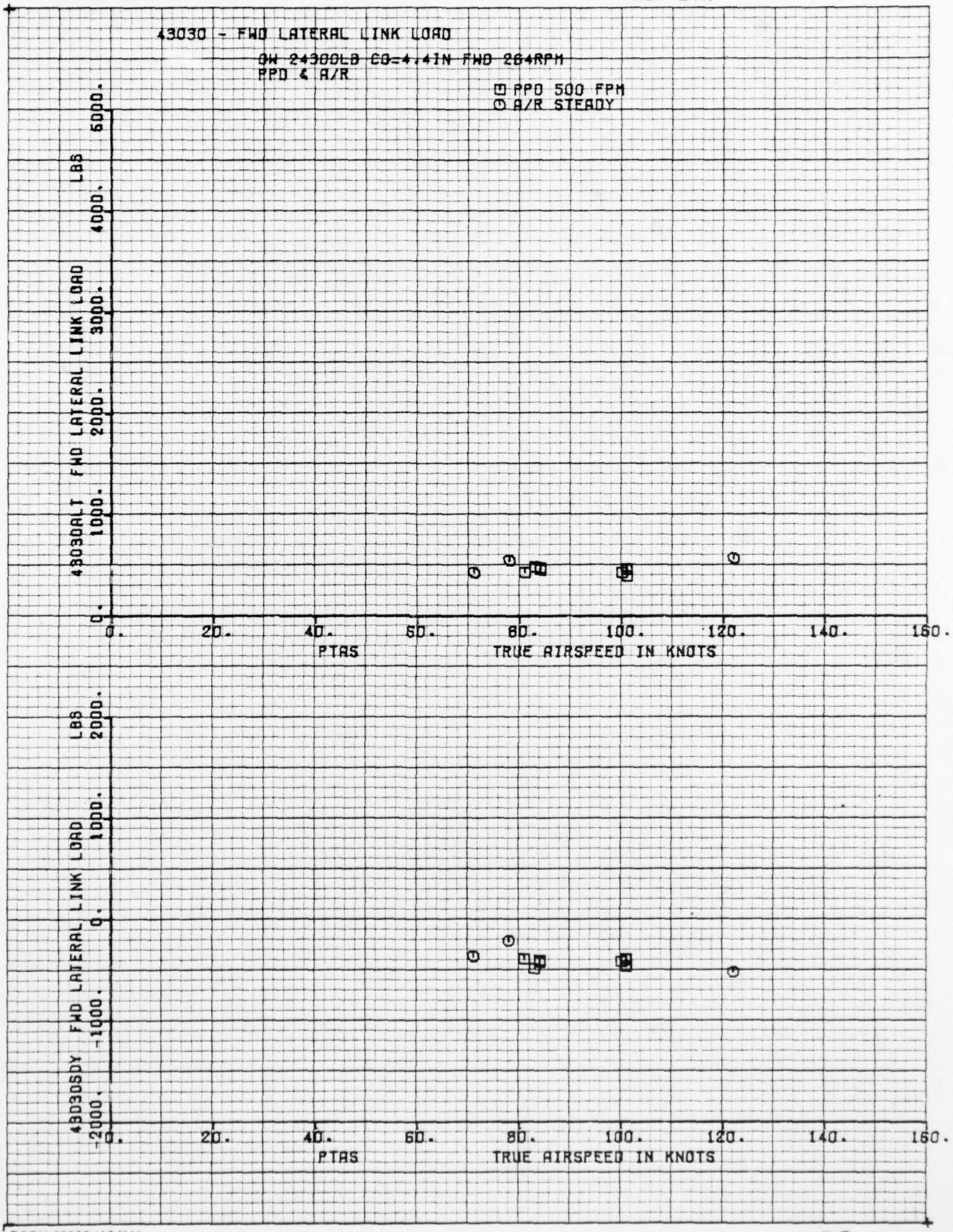


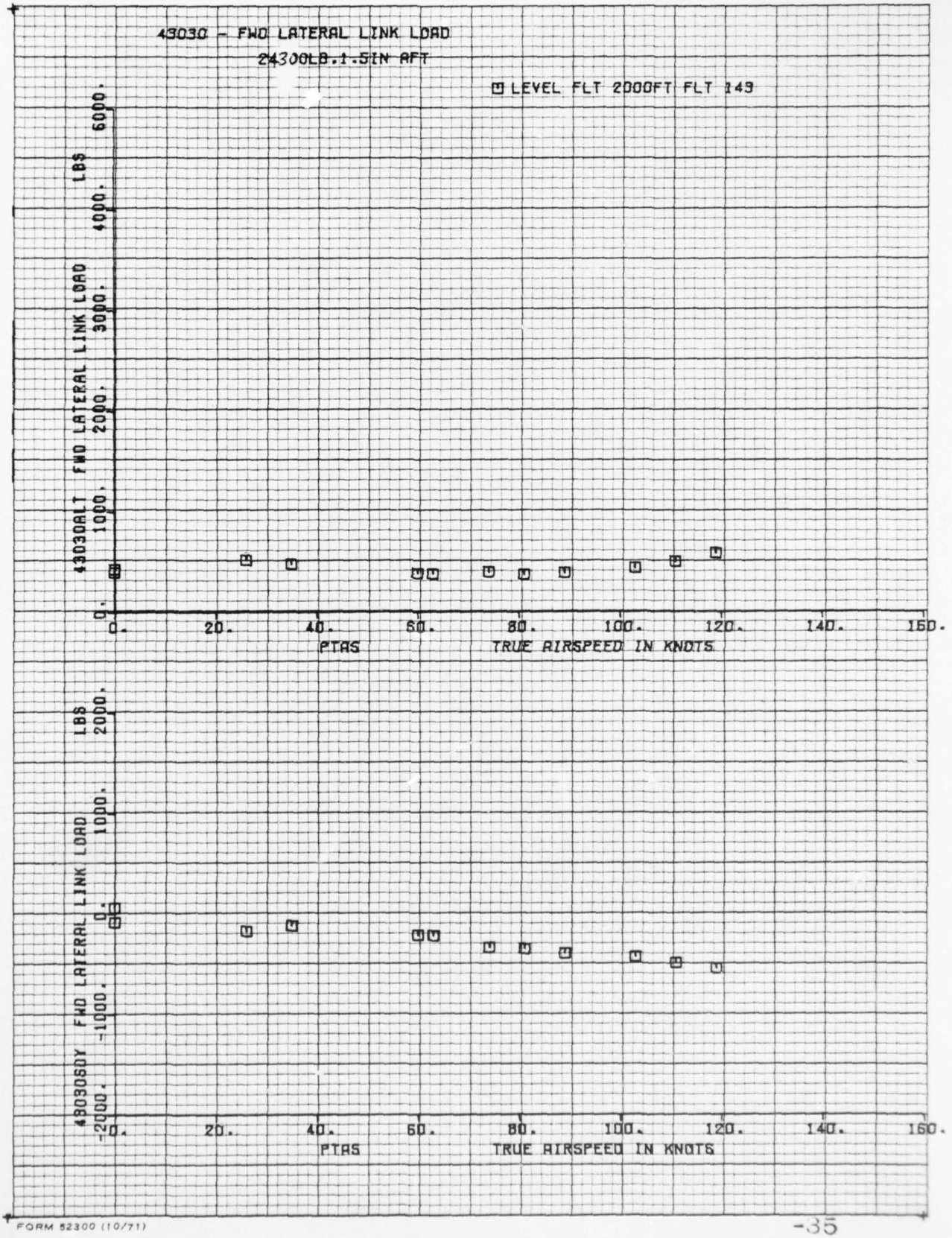
FORM 52300 (10/71)


49030 - FWD LATERAL LINK LOAD
GW=243000LB CG=4.4IN FWD
POWER ON CONTROL REVERSALS
LAT CONT REV 2000FT
LONG CONT REV 2000FT
DIR CONT REV 2000FT
LAT CONT REV >6000FT
LONG CONT REV >6000FT
DIR CONT REV >6000FT
49030ALT FWD LATERAL LINK LOAD LBS
6000.
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
49030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


43030 - FWD LATERAL LINK LOAD
GW=24300LB CG=4.4IN FWD 264RPM
FLARE TO HOVER
FLARE TO HOVER
SPIRAL DESCENT
43D3DALT FWD LATERAL LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030SDY FWD LATERAL LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



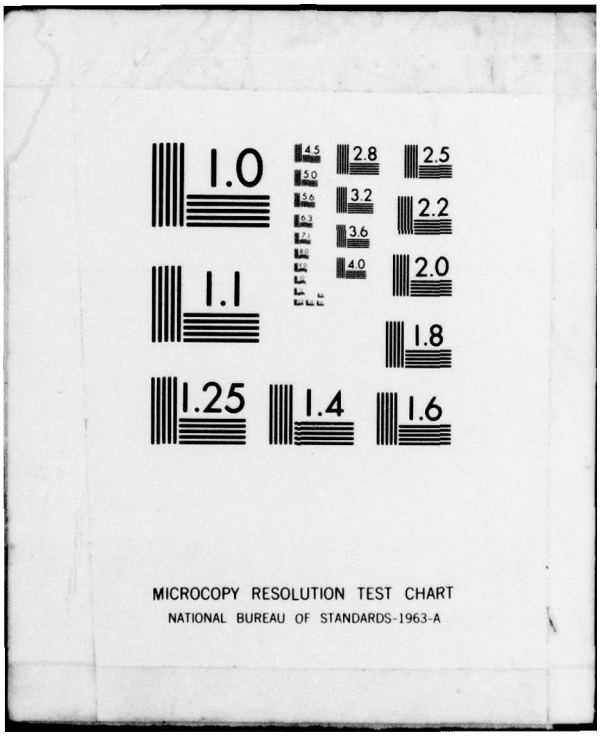

43030 - FWD LATERAL LINK LOAD
24300LB.1.5IN AFT
LEVEL FLT 2000FT FLT 149
43030ALT FWD LATERAL LINK LOAD LBS
0.
1000.
2000.
3000.
4000.
6000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43030GDY FWD LATERAL LINK LOAD LBS
-2000.
-1000.
0.
1000.
2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

AD-A075 615 BOEING VERTOL CO PHILADELPHIA PA F/G 1/3
CH-46 COMPOSITE ROTOR BLADE FLIGHT STRESS SURVEY DATA. VOLUME V--ETC(U)
1978 R AIELLO, J BENDO N00019-75-C-0396
UNCLASSIFIED D210-11168-3-VOL-6 NL

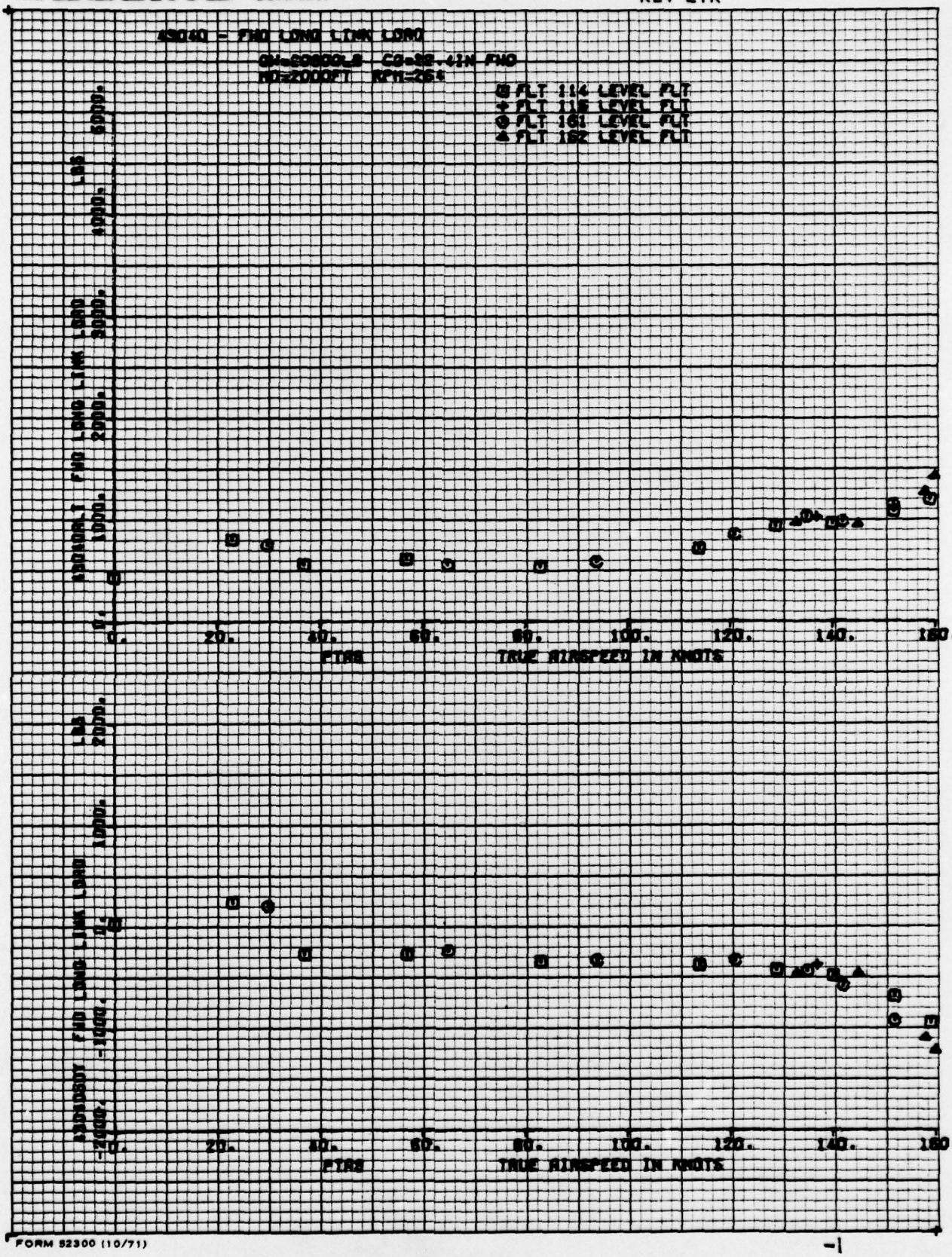
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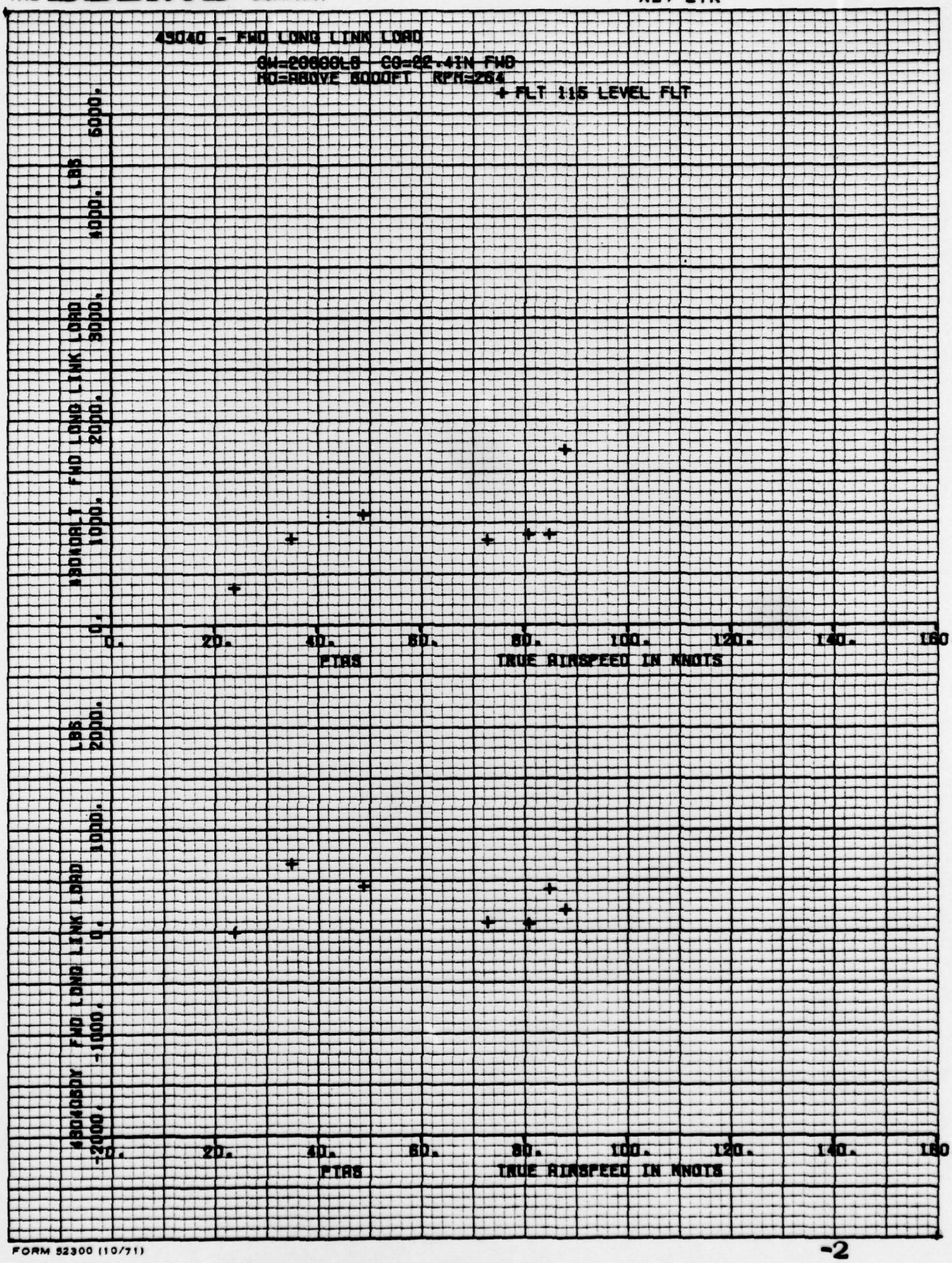

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
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5.0
5.6
6.3
7.1
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

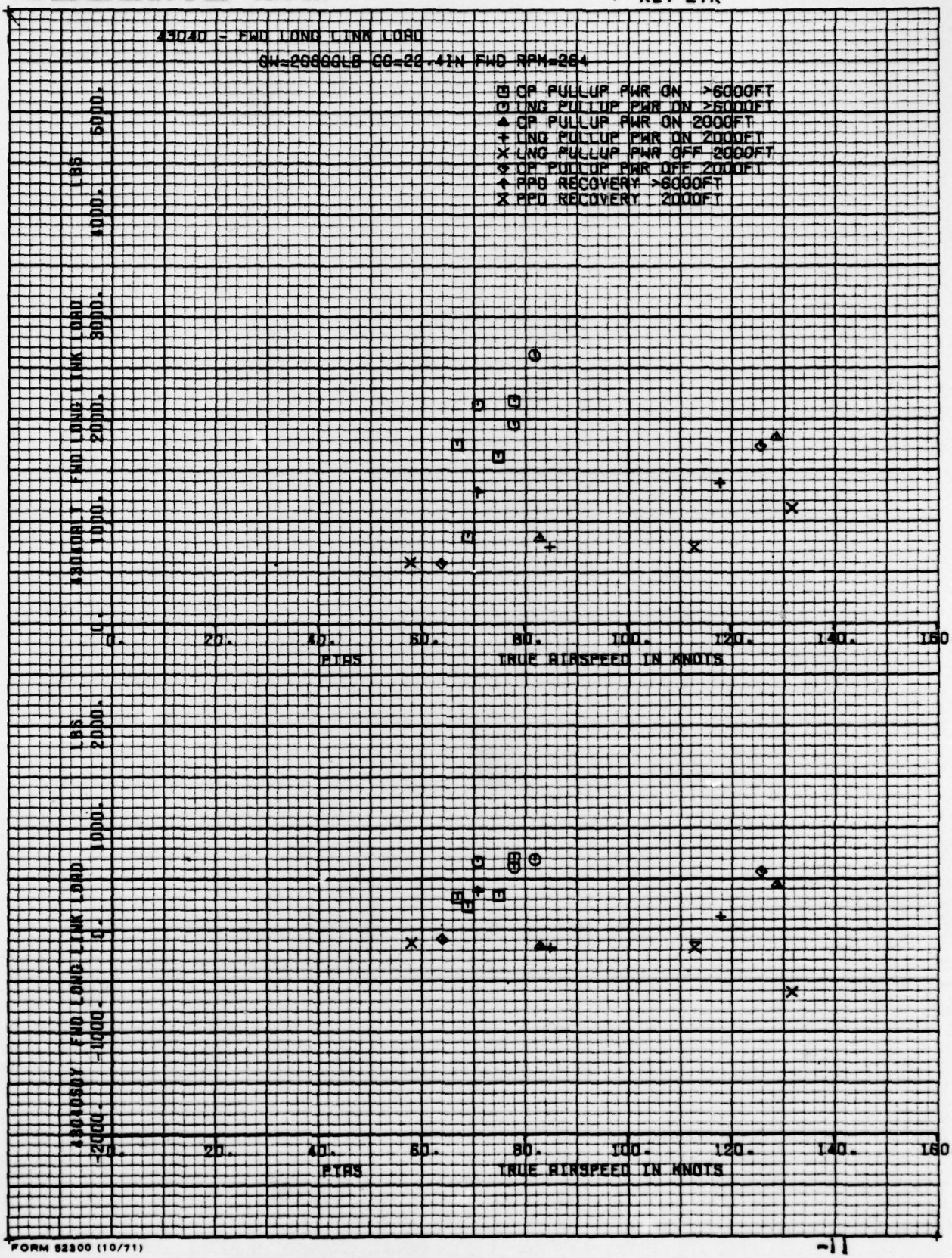
4.9 Forward Longitudinal Link

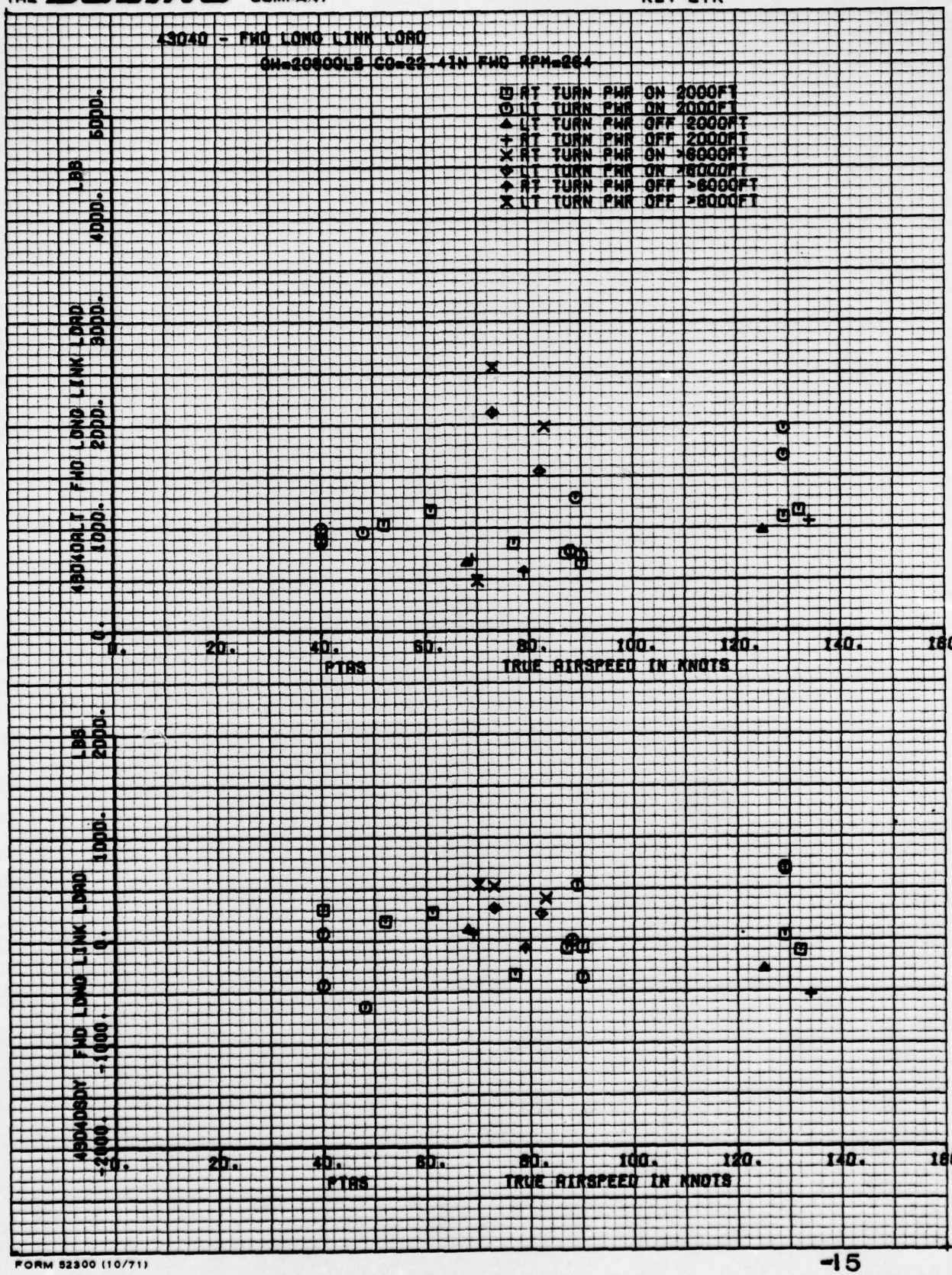


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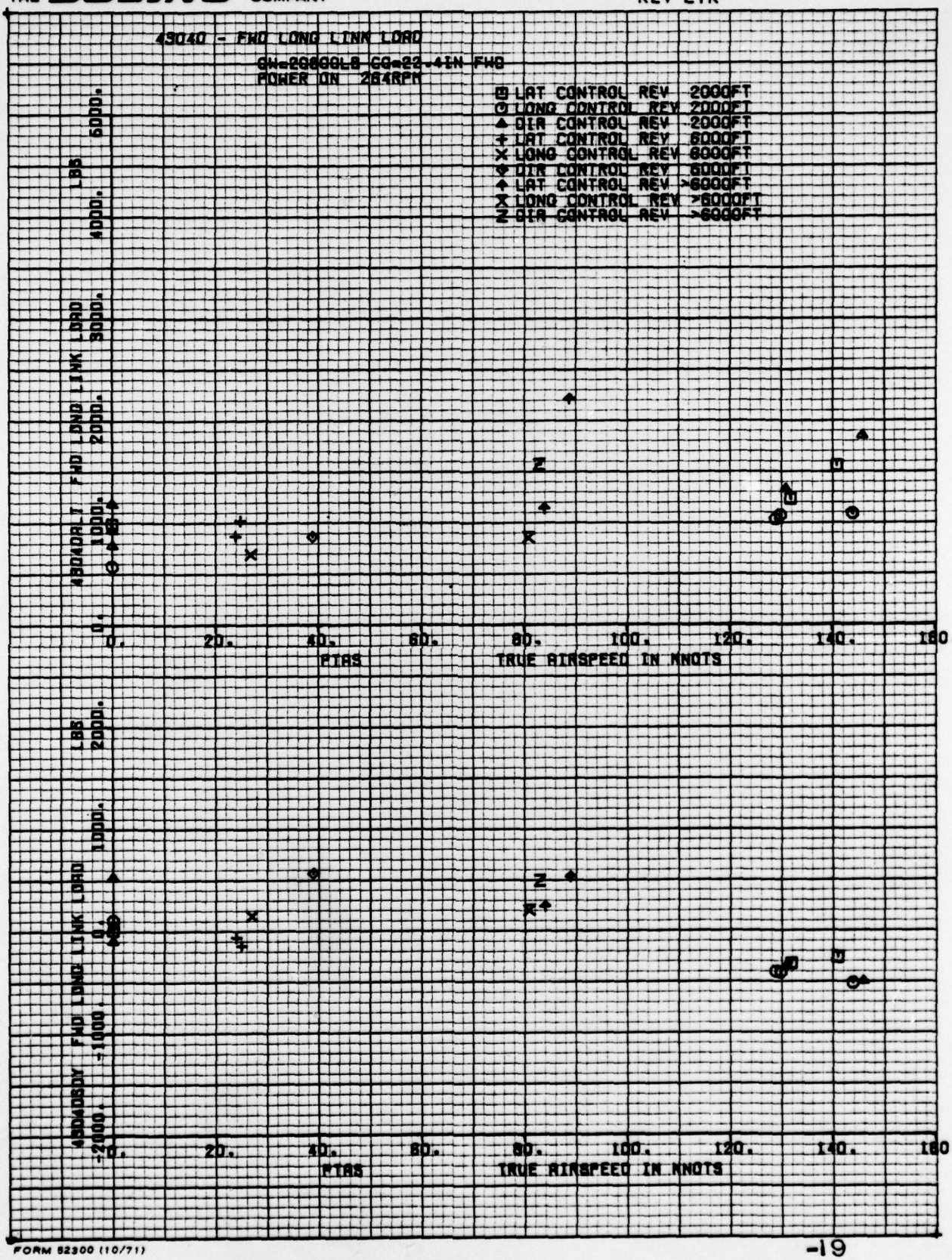
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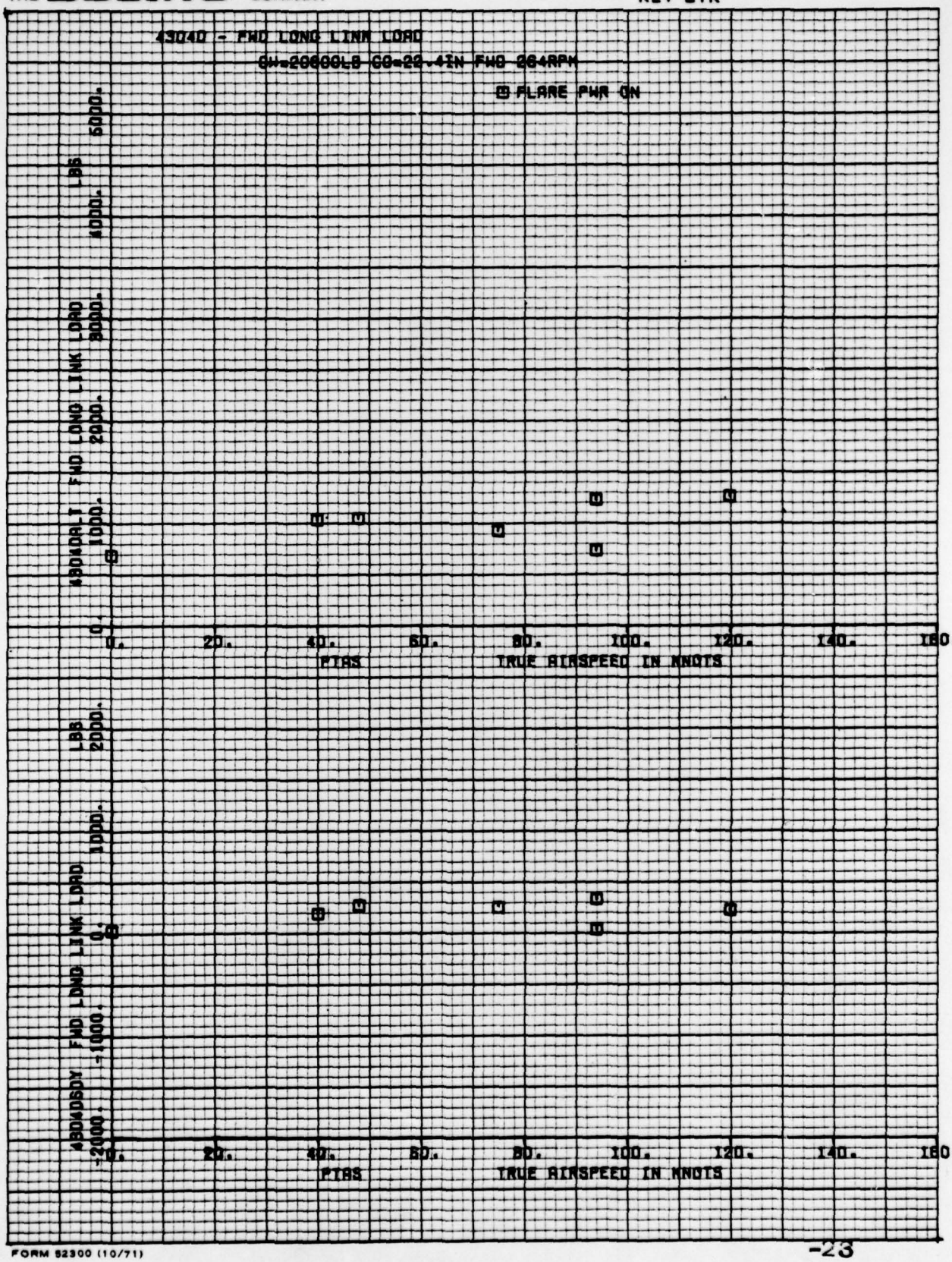

45040 - FWD LONG LINK LOAD
GW=206000LB CG=22.41N FWD
HO=ABOVE 8000FT RPM=264
+ FLT 115 LEVEL FLT
#3040ALT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS
#3040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS

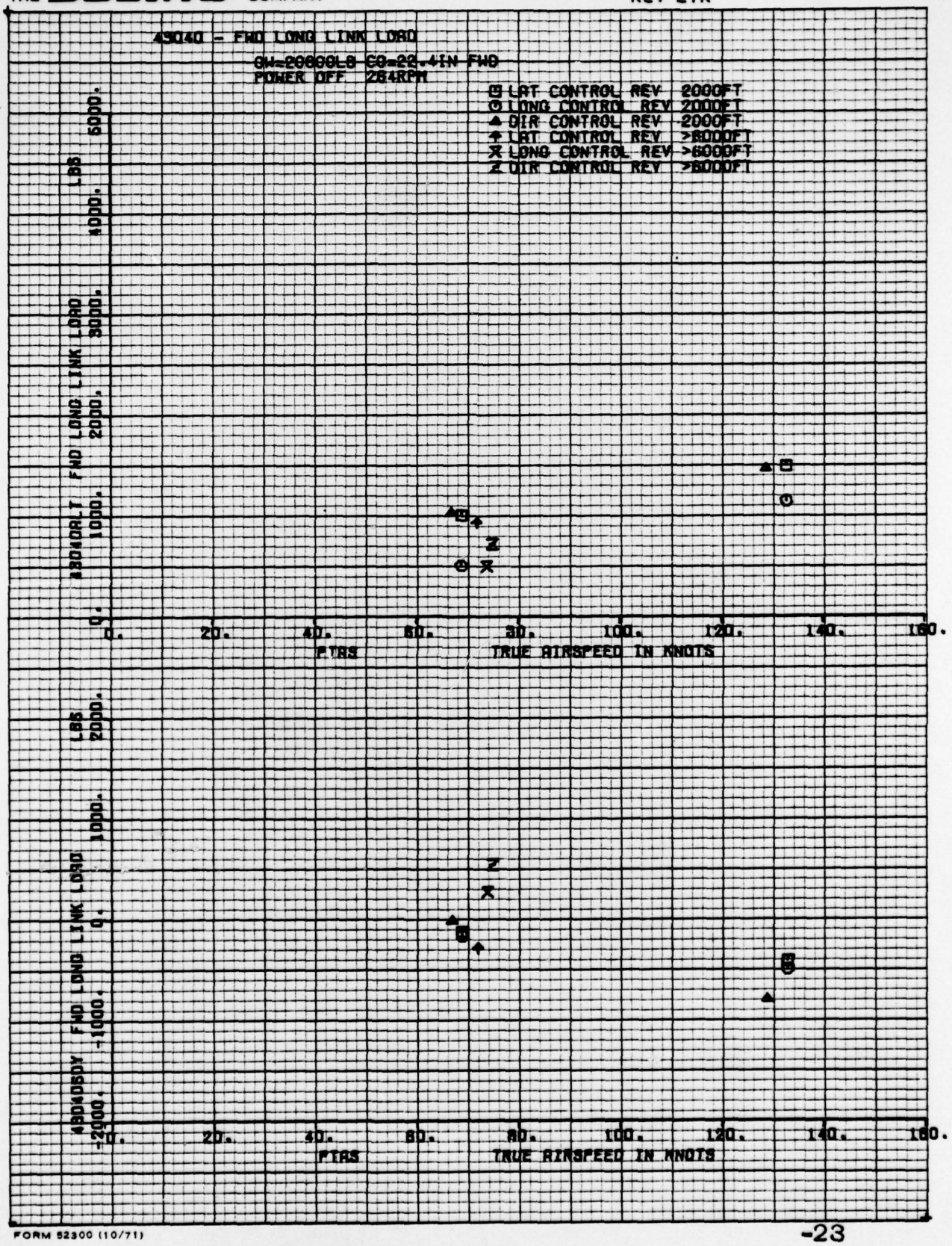

43040 - FWD LONG LINK LOAD
GW=200000LB CG=22.41IN FWD RPM=264
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 2000FT
LNG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
PPD RECOVERY >6000FT
PPD RECOVERY 2000FT
FWD LONG LINK LOAD LBS
6000.
4000.
2000.
0.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS

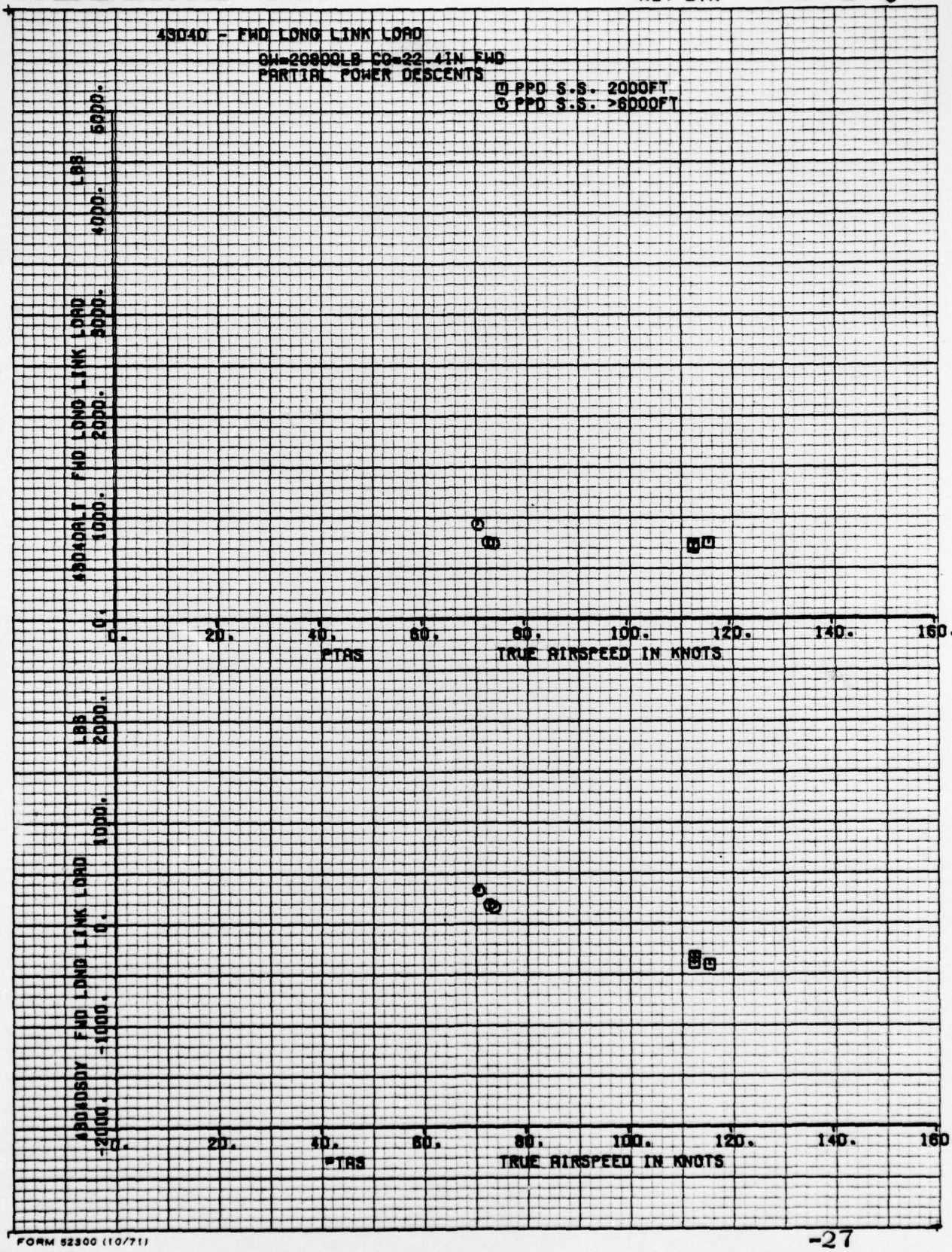


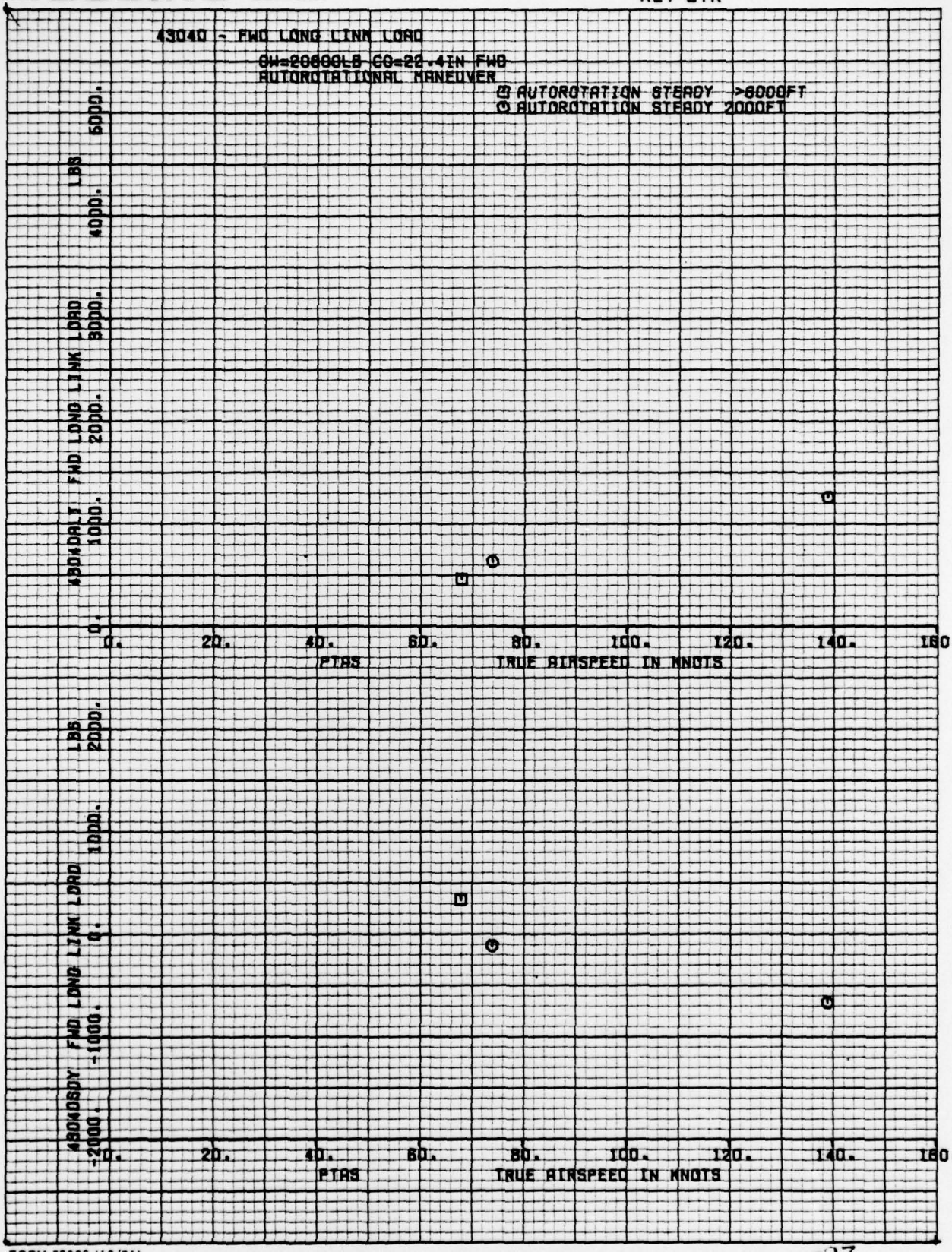
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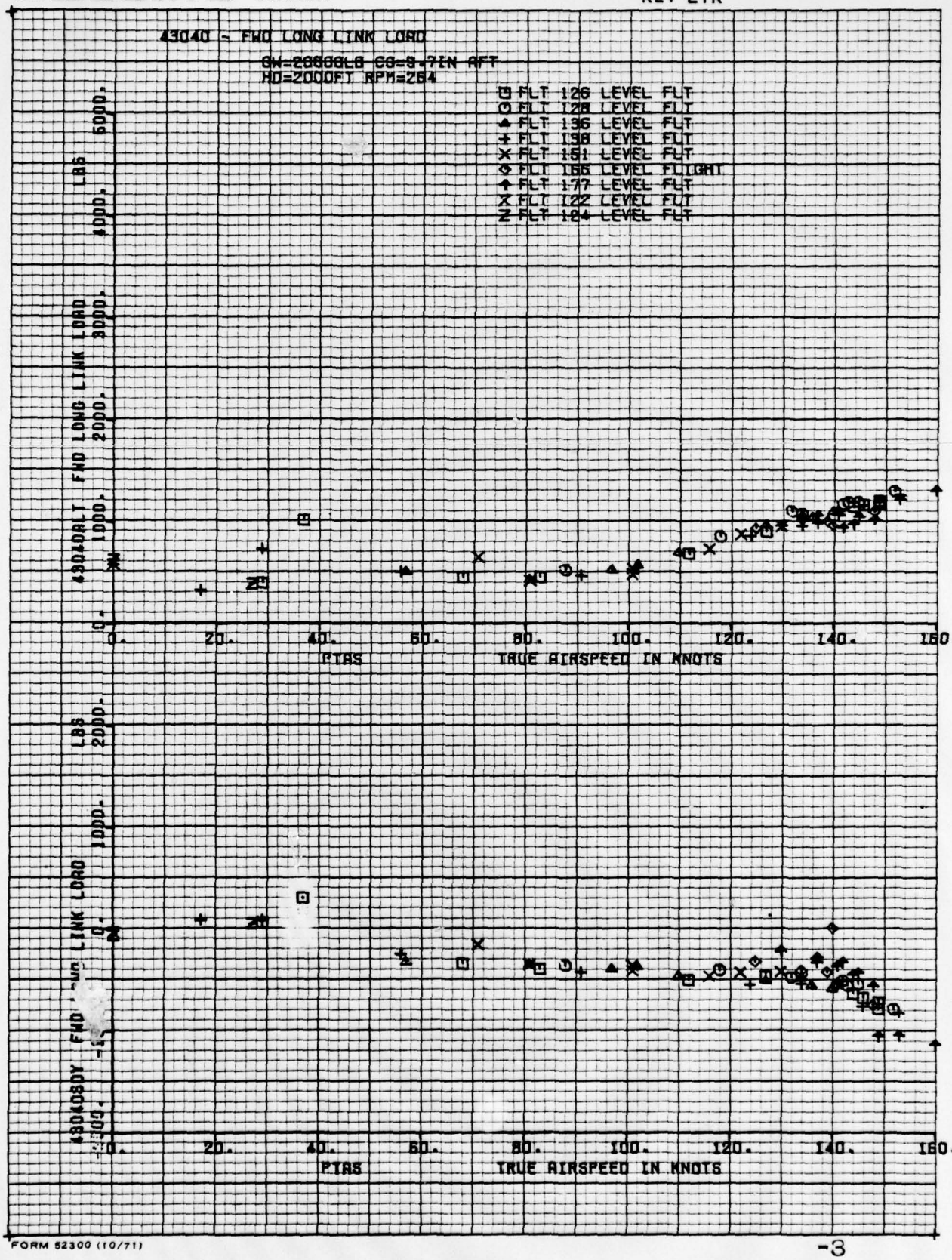

43040 - FWD LONG LINK LOAD
GW=206000LB CG=22.4IN FWD
POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LONG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43040RLT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

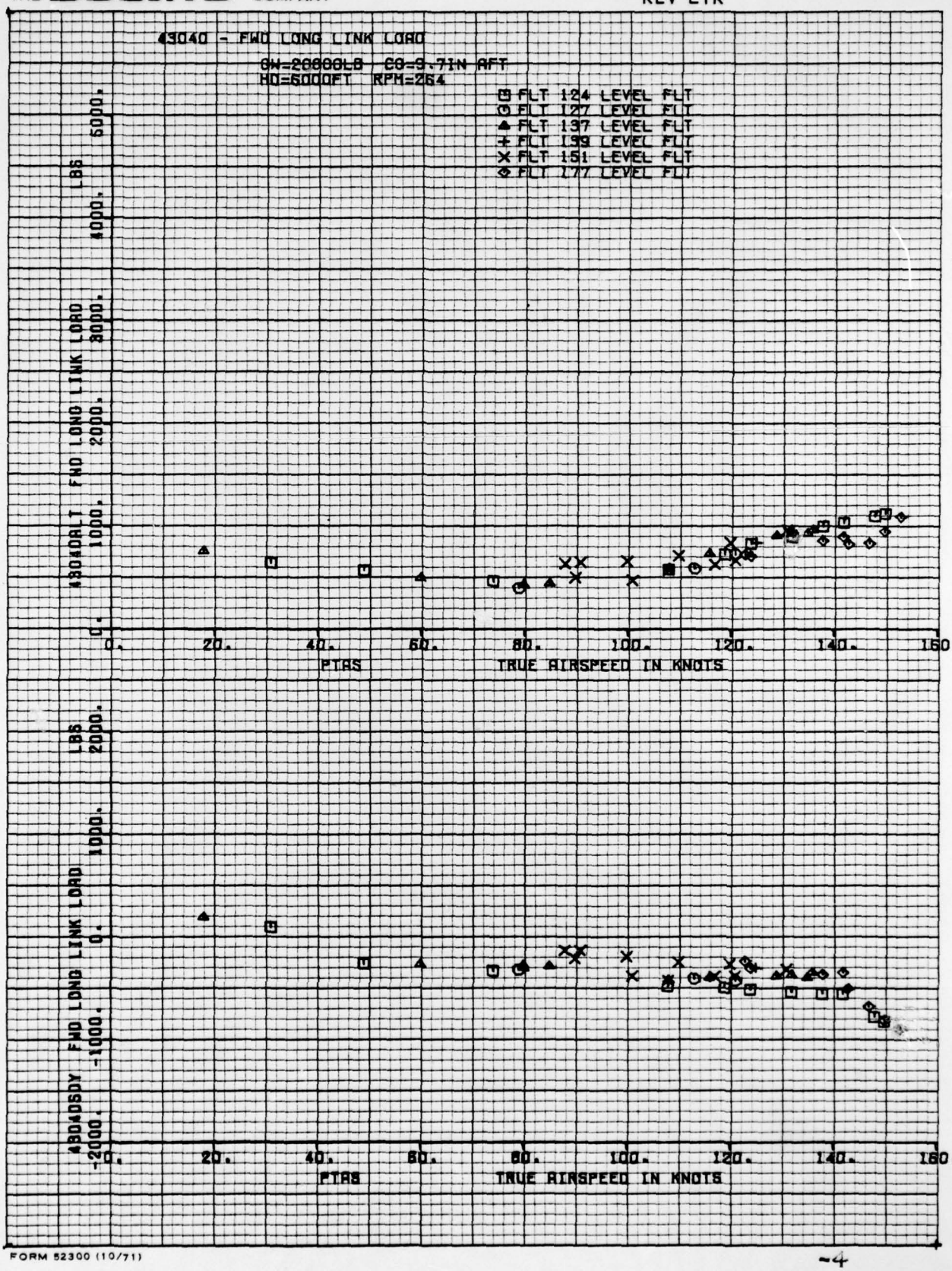

43040 - FWD LONG LINK LOAD
GW=206000LB CG=22.4IN FWD 264RPM
FLARE PWR ON
LBS
5000.
4000.
3000.
2000.
1000.
0.
43040ALT FWD LONG LINK LOAD
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
LBS
2000.
1000.
0.
-1000.
-2000.
43040BDY FWD LONG LINK LOAD
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

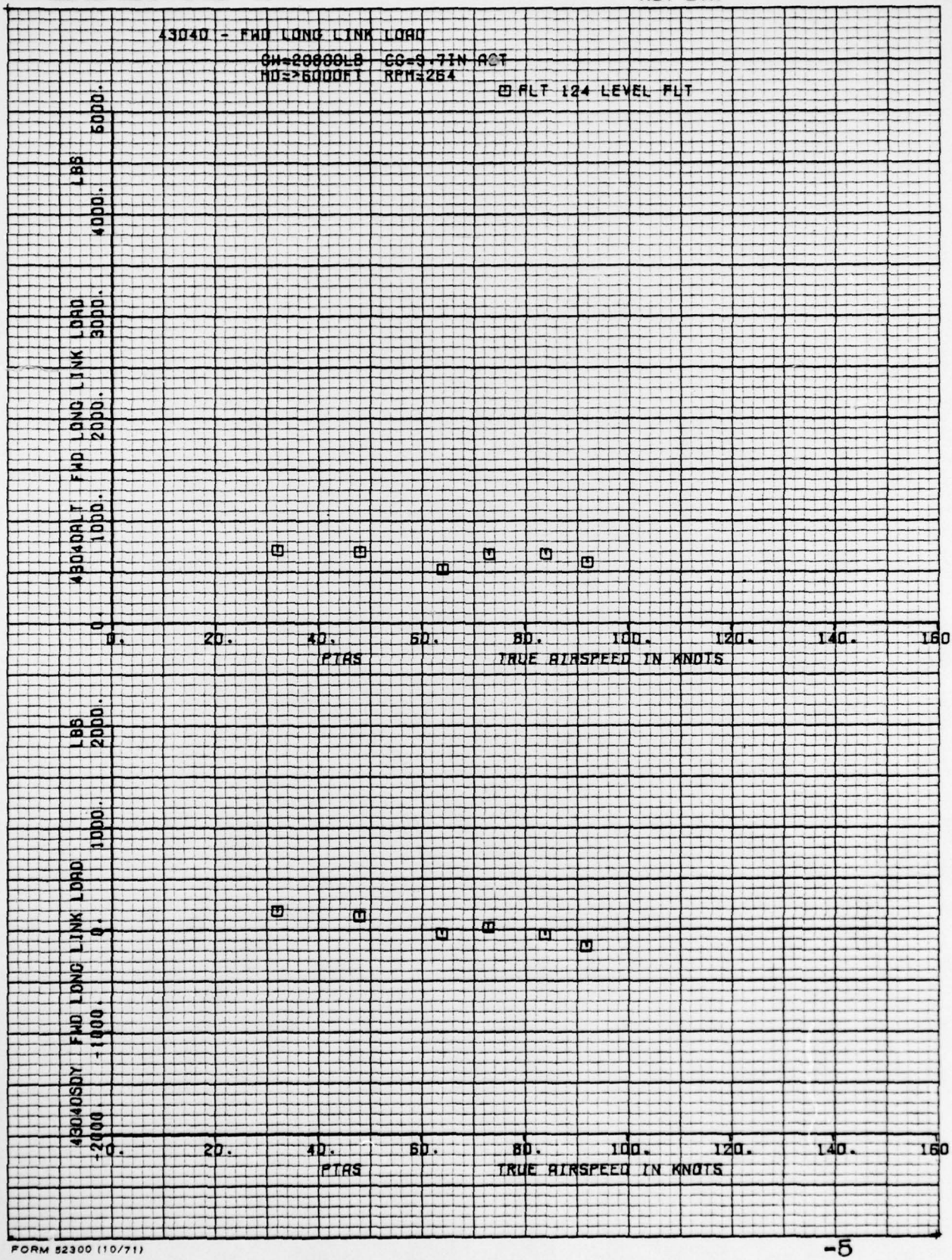

43040 - FWD LONG LINK LOAD
GW=20000LB CG=22.4IN FWD
POWER OFF 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43040LAT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS
43040DY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS
TRUE AIRSPEED IN KNOTS


43040 - FWD LONG LINK LOAD
GW=208000LB CG=22.41N FWD
PARTIAL POWER DESCENTS
① PPD S.S. 2000FT
② PPD S.S. >6000FT
43040ALT FWD LONG LINK LOAD LBS
6000.
4000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

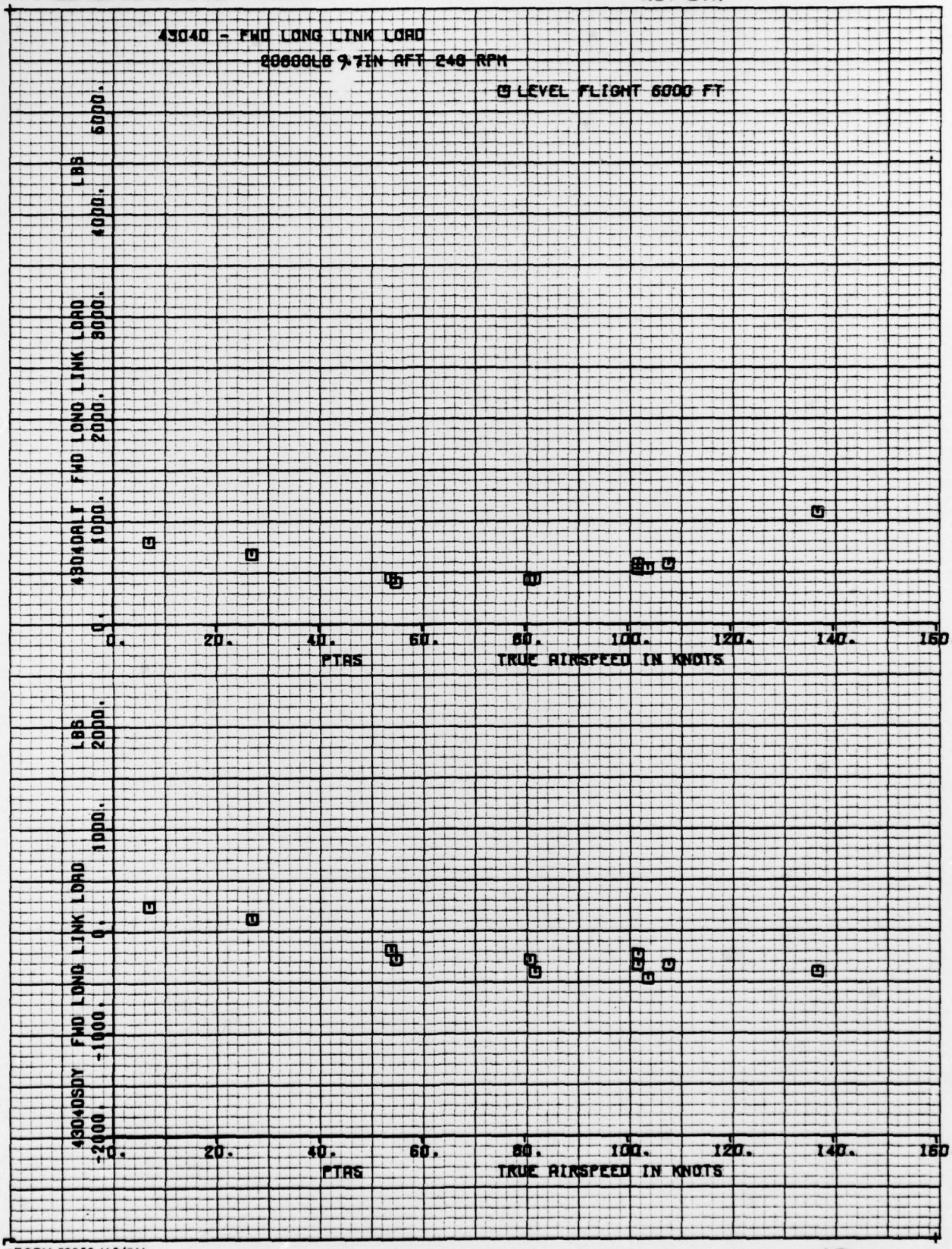

43040 - FWD LONG LINK LOAD
GW=20600LB CG=22.4IN FWD
AUTOROTATIONAL MANEUVER
① AUTOROTATION STEADY >6000FT
② AUTOROTATION STEADY 2000FT
43040ALT FWD LONG LINK LOAD LBS
6000.
4000.
2000.
0.
1000.
3000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43040DOY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


43040 - FWD LONG LINK LOAD
GW=28000LB CG=8.7IN AFT
HD=2000FT RPM=264
FLT 126 LEVEL FLT
FLT 128 LEVEL FLT
FLT 136 LEVEL FLT
FLT 138 LEVEL FLT
FLT 151 LEVEL FLT
FLT 166 LEVEL FLIGHT
FLT 177 LEVEL FLT
FLT 122 LEVEL FLT
FLT 124 LEVEL FLT
43040ALT FWD LONG LINK LOAD LBS
6000.
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

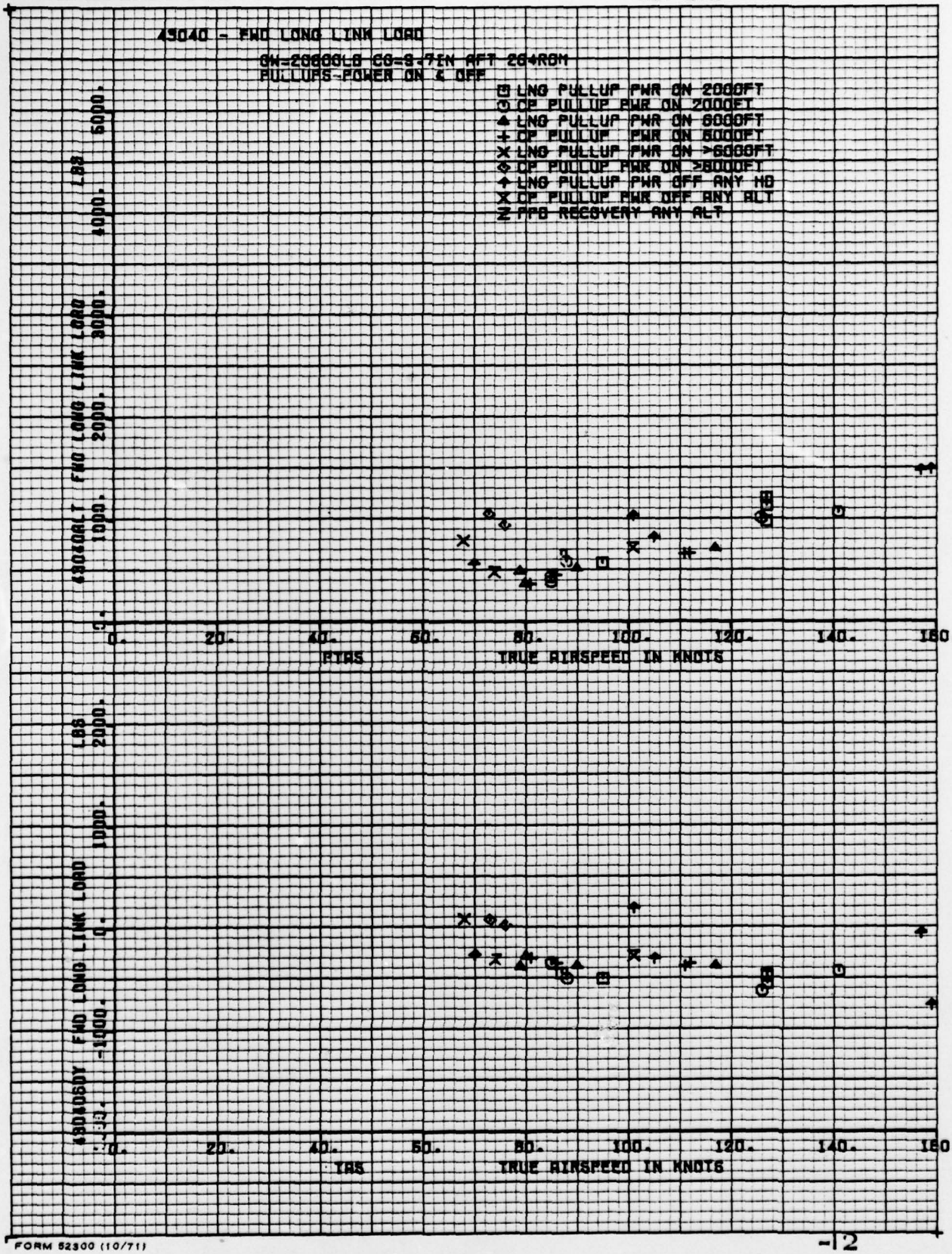

43040 - FWD LONG LINK LOAD
GW=206000LB CG=9.71N AFT
HO=6000FT RPM=264
FLT 124 LEVEL FLT
FLT 127 LEVEL FLT
FLT 137 LEVEL FLT
FLT 139 LEVEL FLT
FLT 151 LEVEL FLT
FLT 177 LEVEL FLT
43040ALT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


43040 - FWD LONG LINK LOAD
GW=208000LB CG=9.71N ACT
HO=>6000FT RPM=264
FLT 124 LEVEL FLT
43040ALF FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY

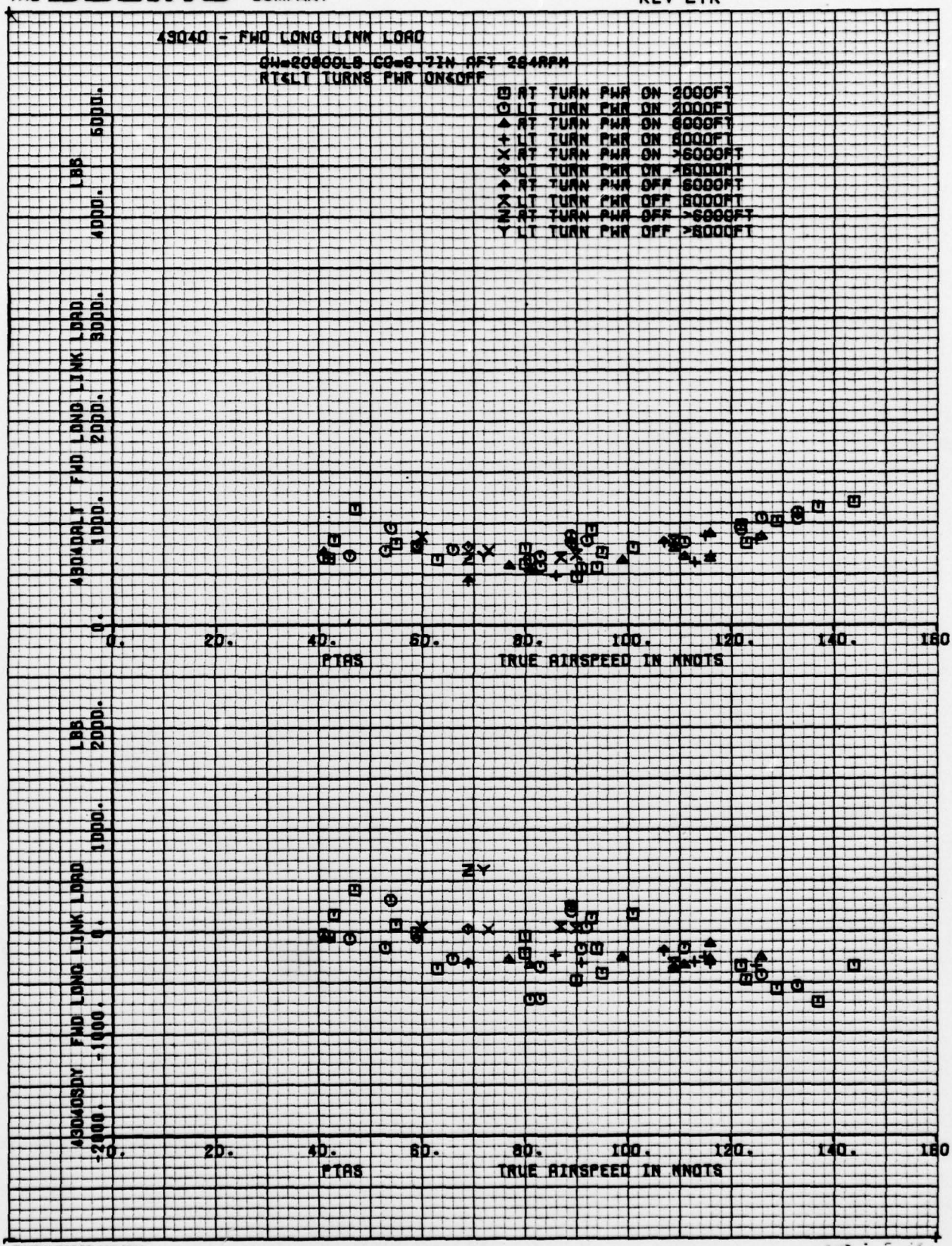


THE BOEING COMPANY

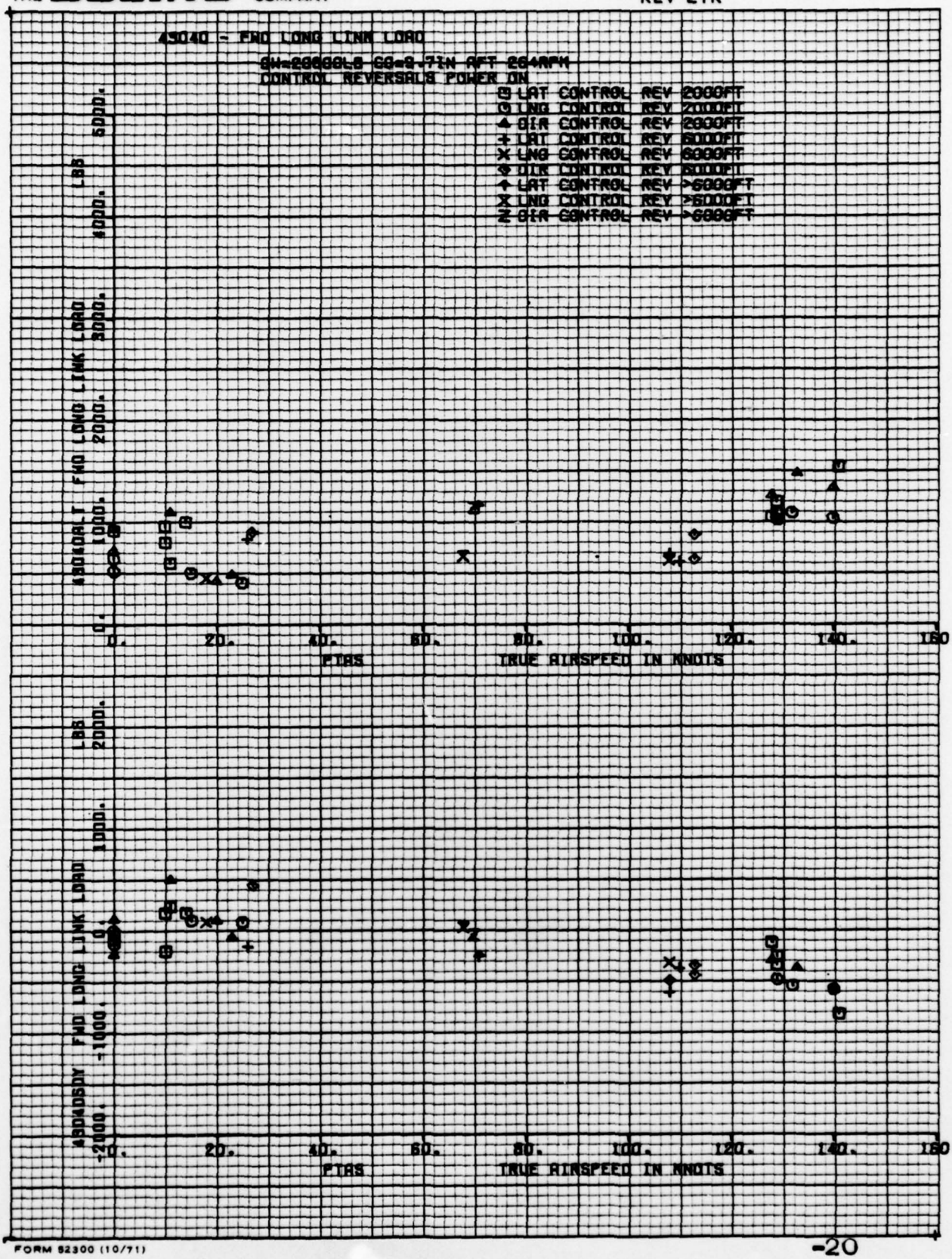


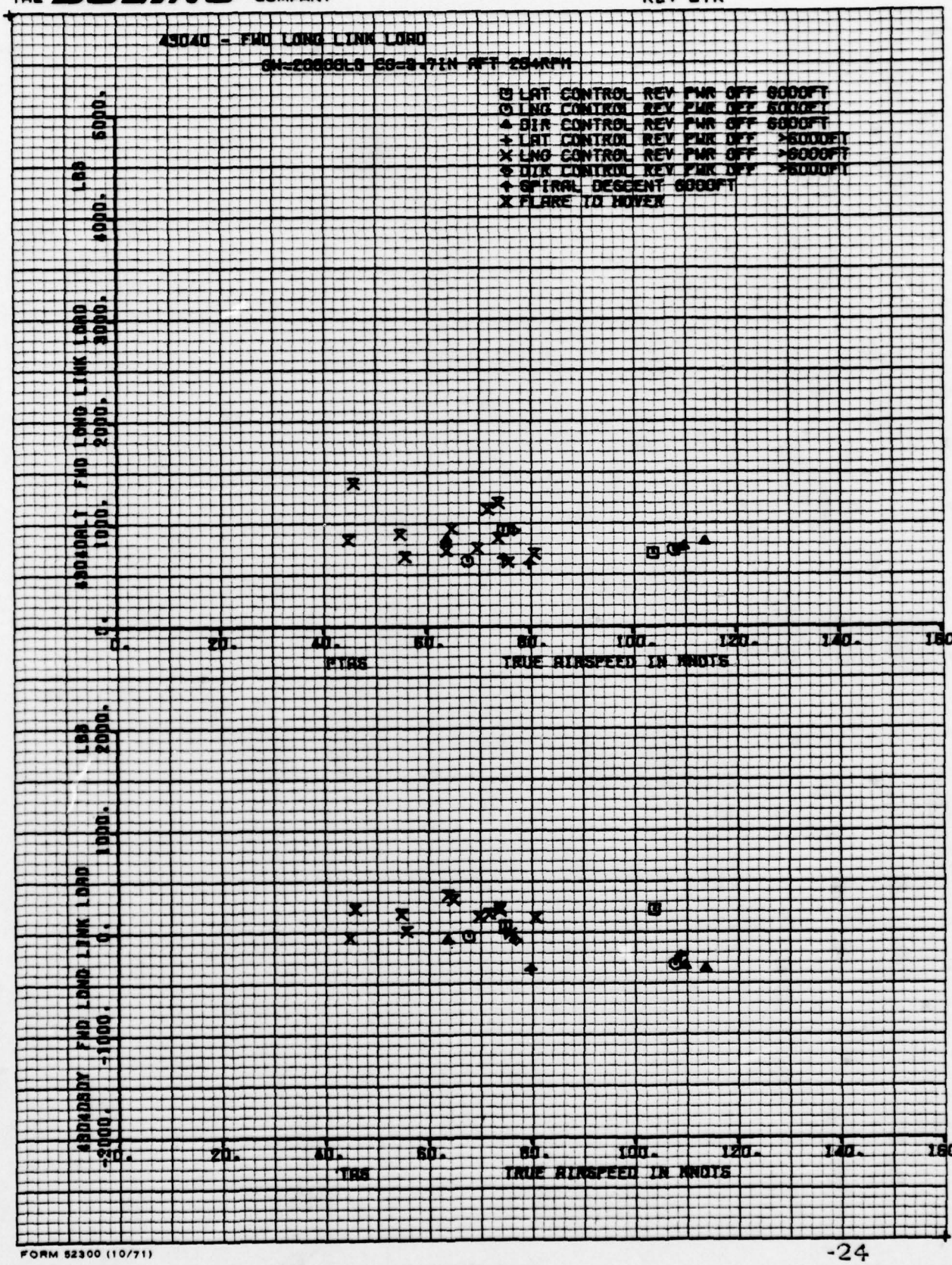
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THE BOEING COMPANY

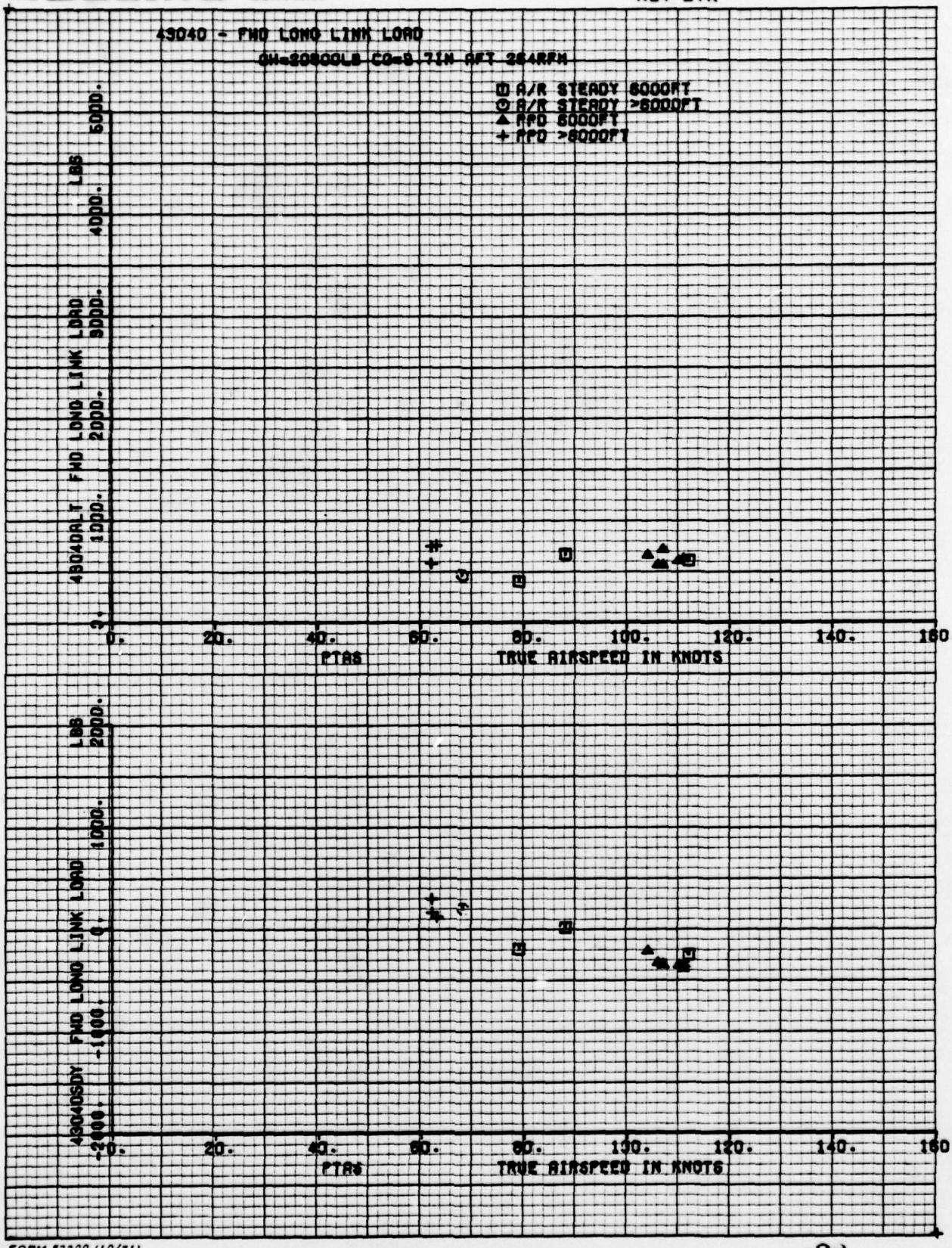


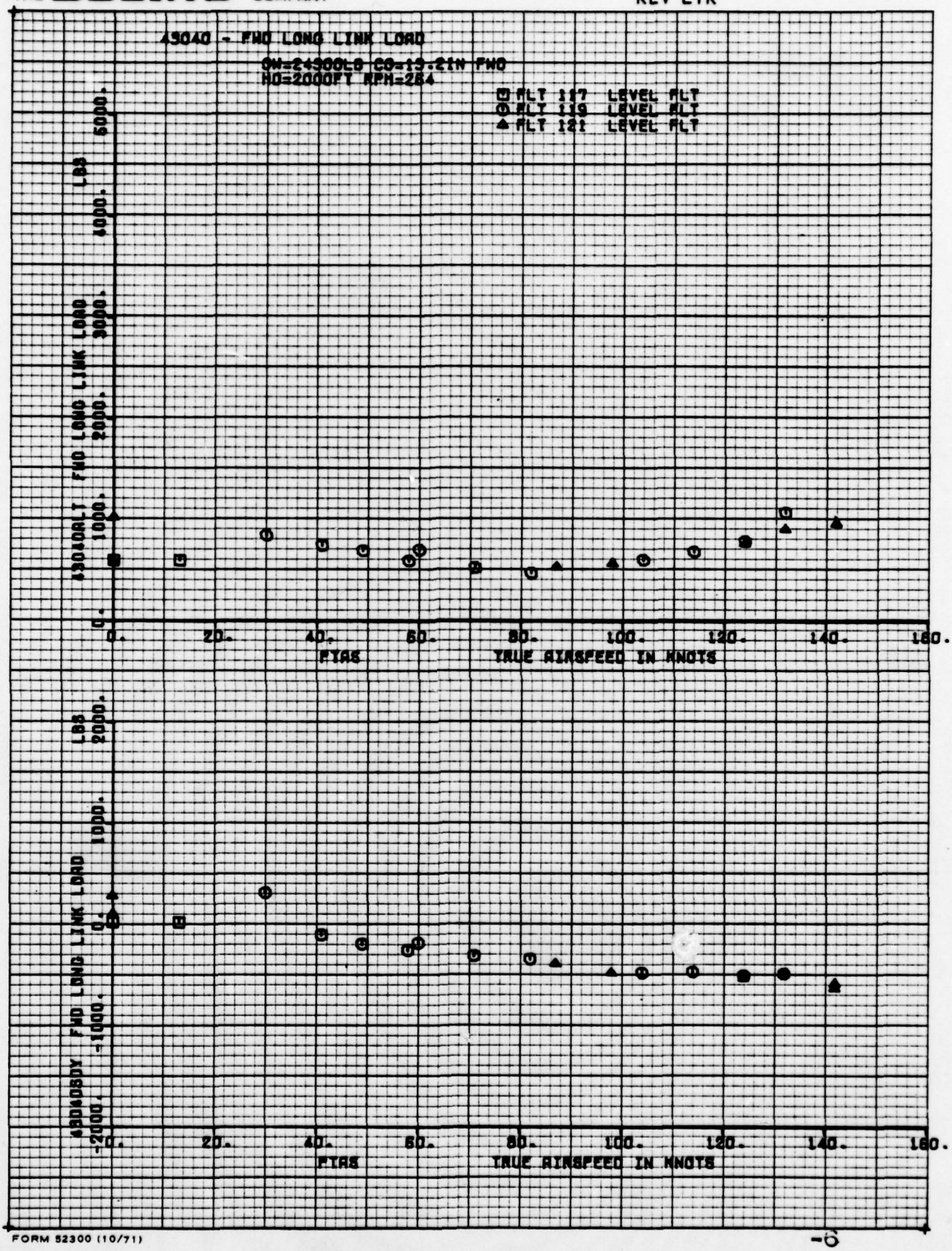
FORM 82300 (10/71)

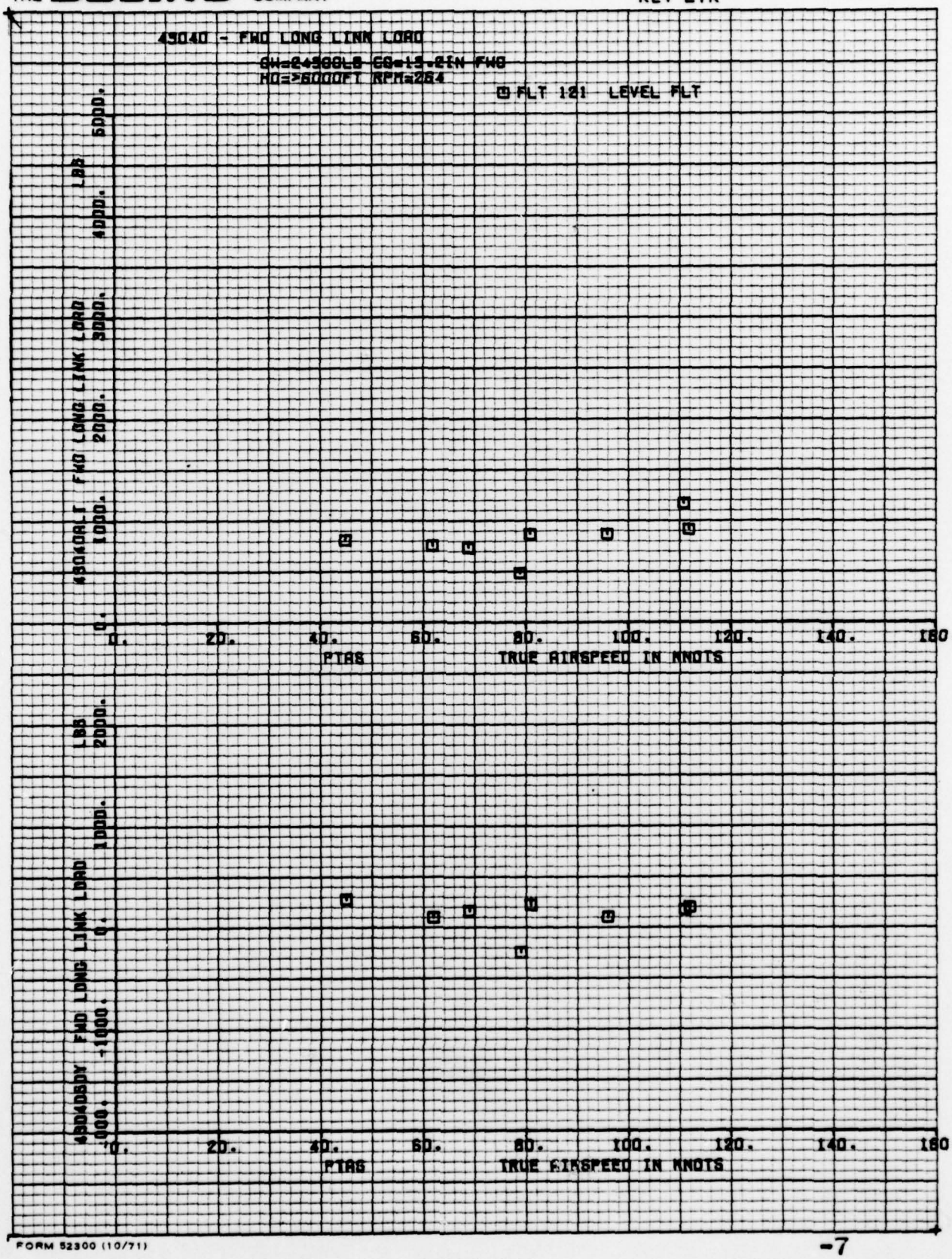

43040 - FWD LONG LINK LOAD
GW=200000LB CG=8.71IN AFT 264RPM
CONTROL REVERSALS POWER ON
LAT CONTROL REV 2000FT
LNG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LNG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LNG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43040ALT FWD LONG LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

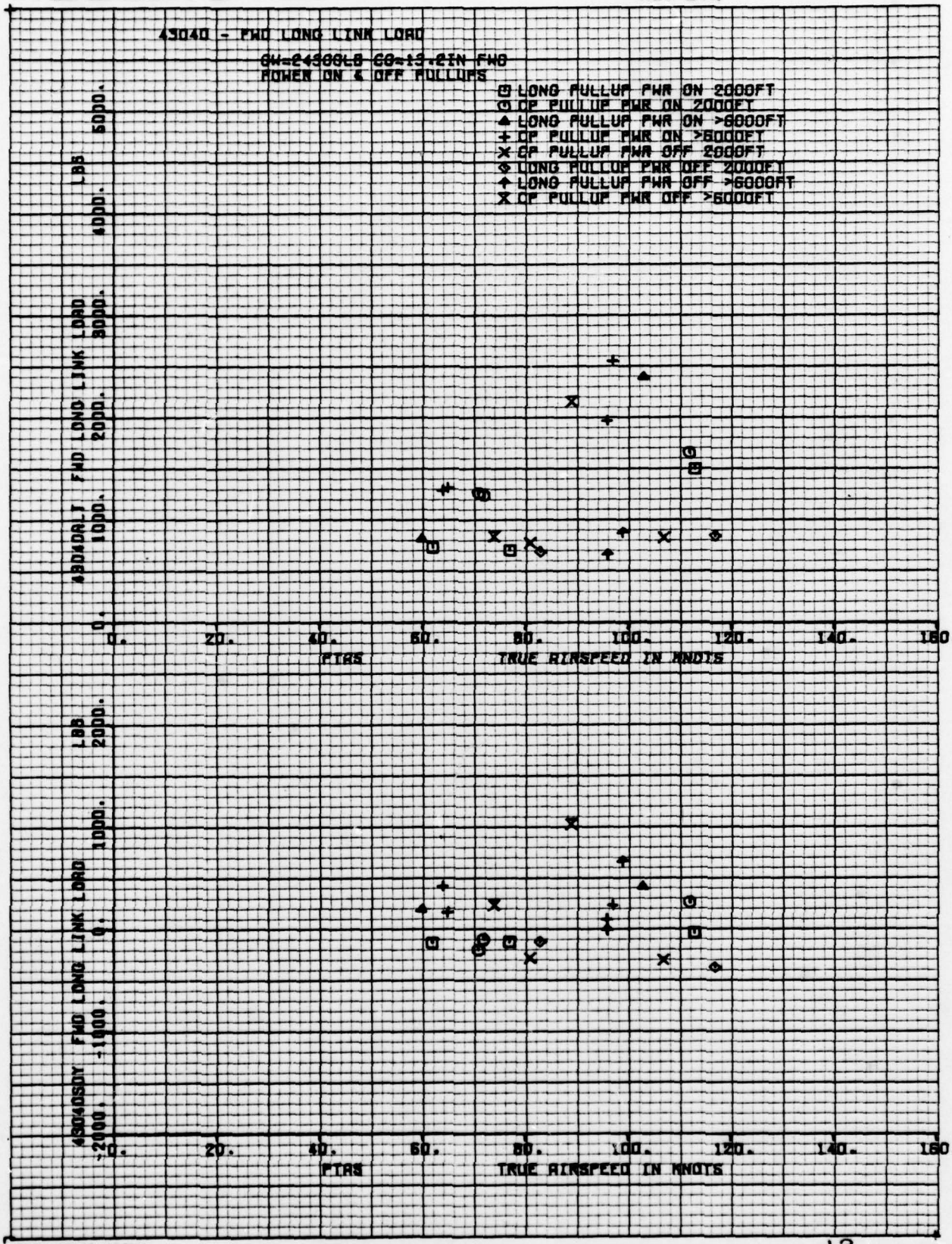


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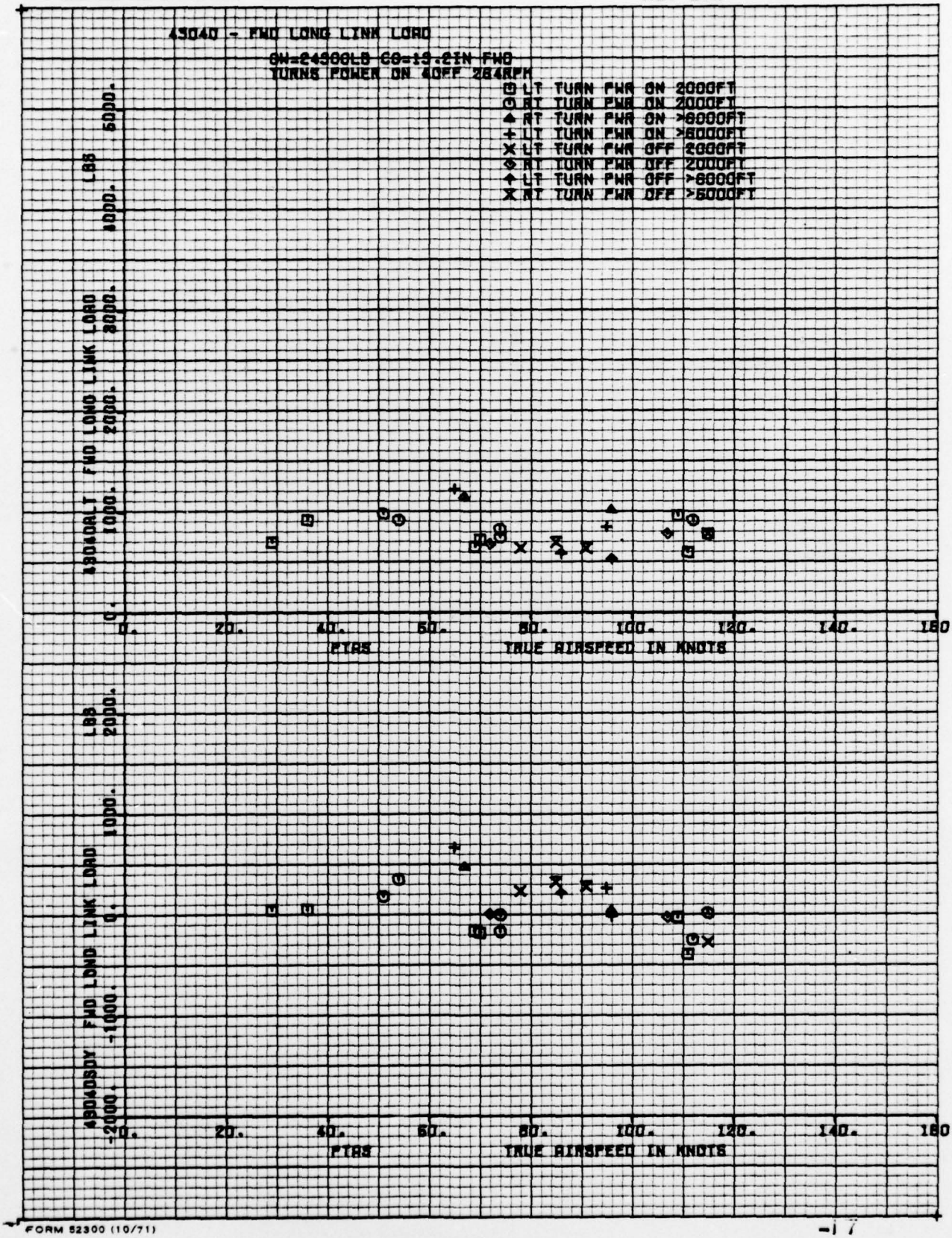

43040 - FWD LONG LINK LOAD
GW=208000LB CG=8.7IN AFT 284RFM
A/R STEADY 6000FT
A/R STEADY >6000FT
RPO 6000FT
RPO >6000FT
43040ALT FWD LONG LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS
TRUE AIRSPEED IN KNOTS


43040 - FWD LONG LINK LOAD
GW=249000LB CG=19.2IN FWD
HD=2000FT RPM=264
FLT 117 LEVEL FLT
FLT 119 LEVEL FLT
FLT 121 LEVEL FLT
43040ALT FWD LONG LINK LOAD LBS
6000.
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS
43040BDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS


45040 - FWD LONG LINK LOAD
GW=245000LB CG=15.2IN FWD
HO=>50000FT RPM=264
FLT 121 LEVEL FLT
45040ALF FWD LONG LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
45040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

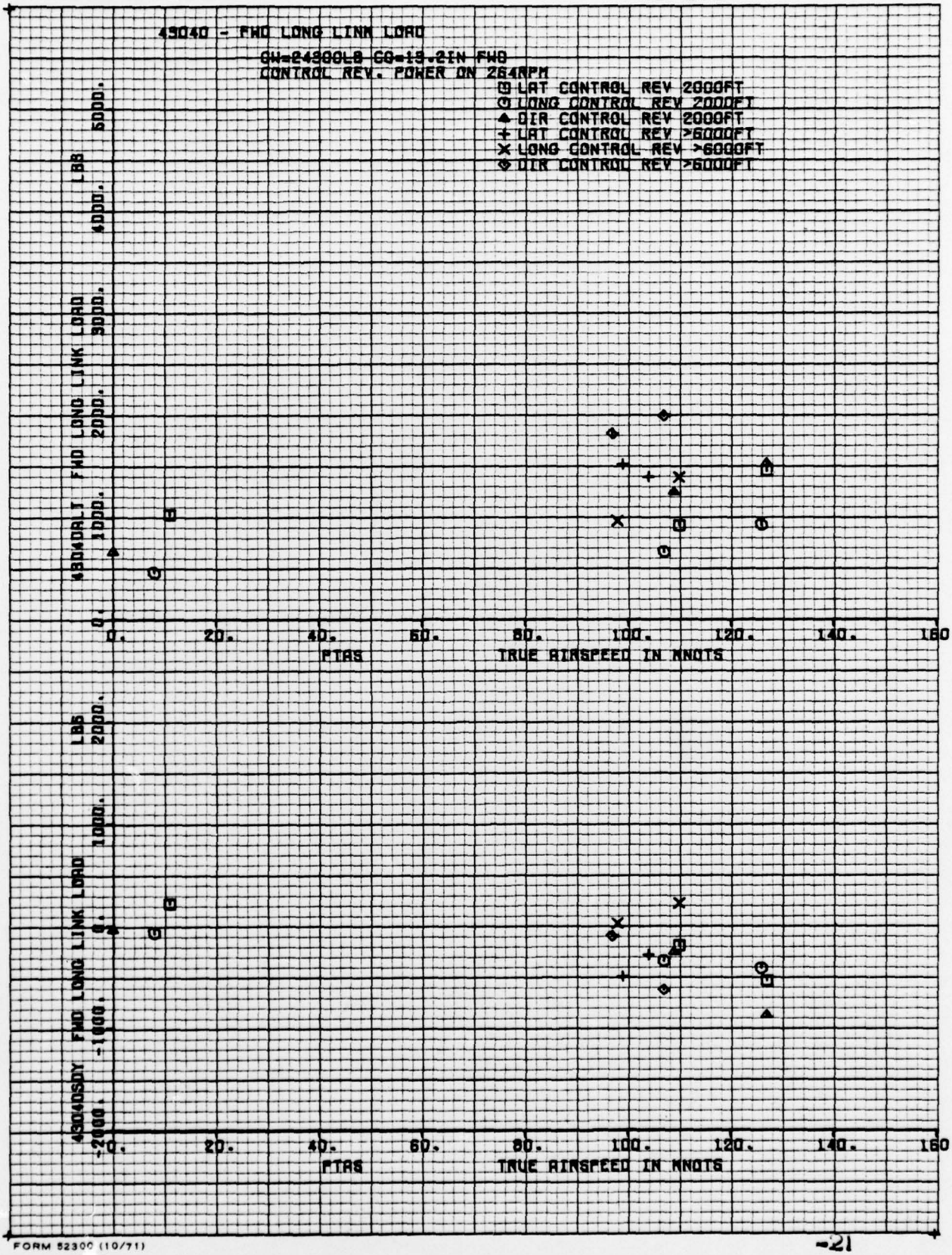

43040 - FWD LONG LINK LOAD
GW=243000LB CG=13.2IN FWD
POWER ON & OFF PULLUPS
LONG PULLUP PWR ON 2000FT
CF PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CF PULLUP PWR ON >6000FT
CF PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF >6000FT
CF PULLUP PWR OFF >6000FT
43040ALT FWD LONG LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

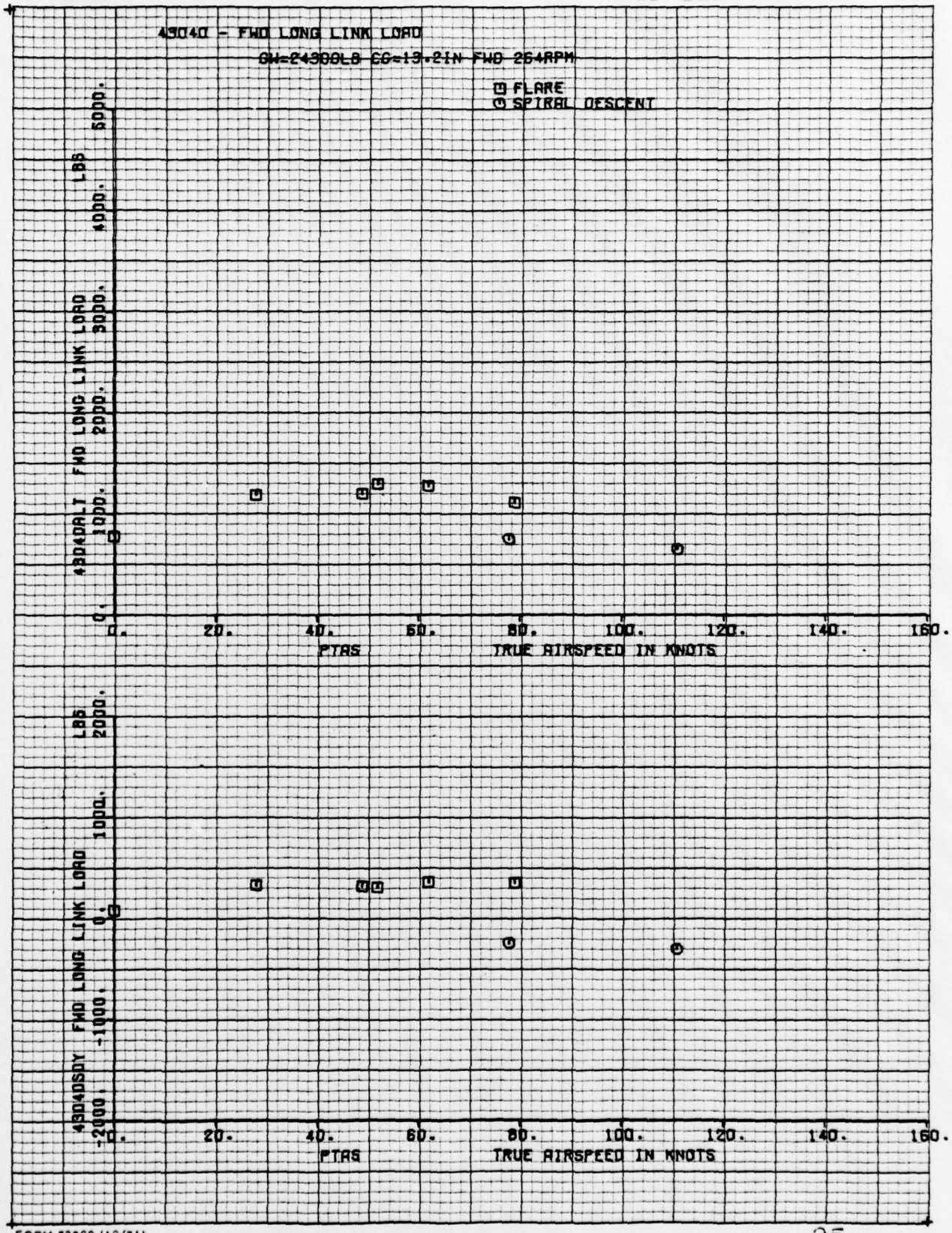
THE BOEING COMPANY

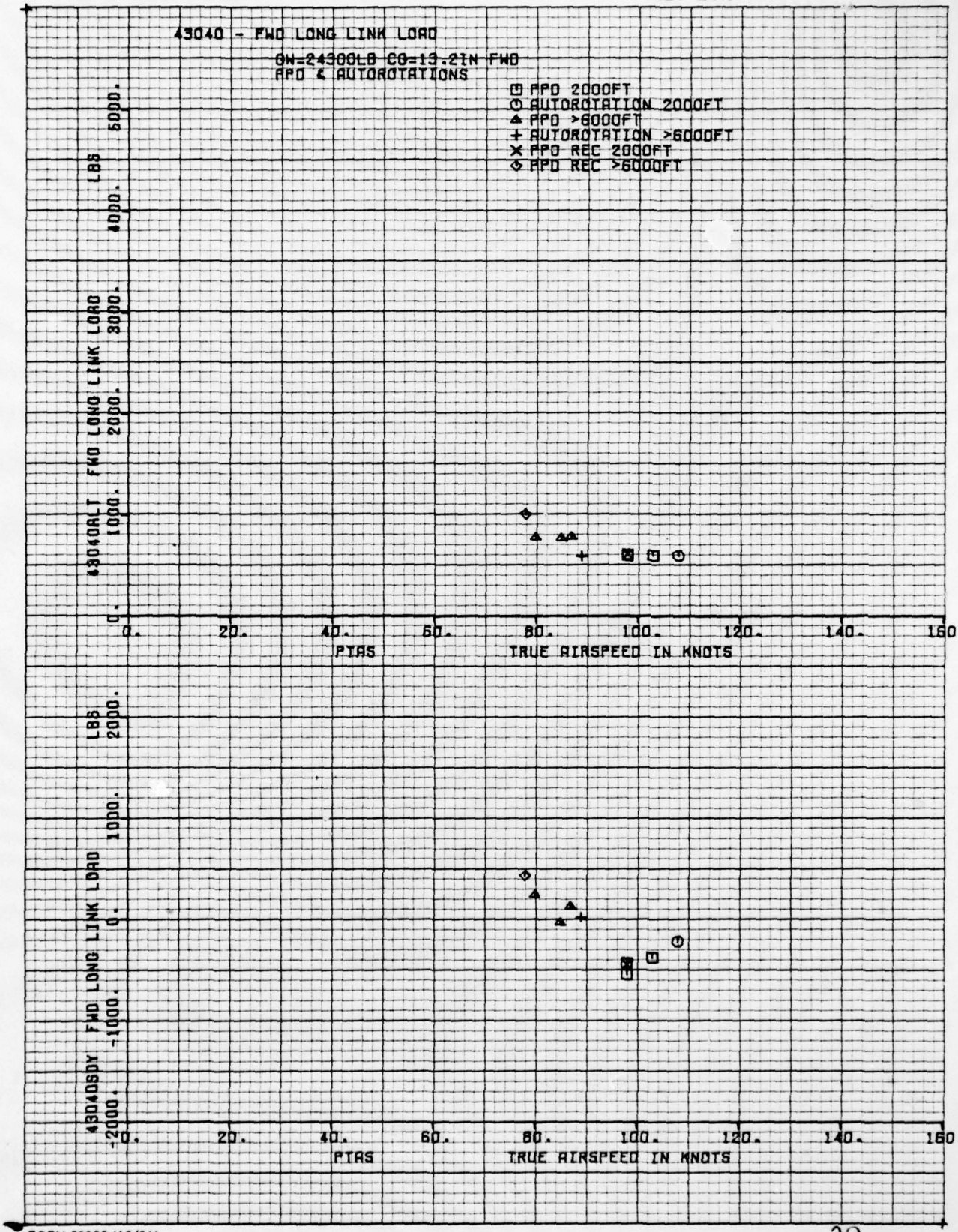


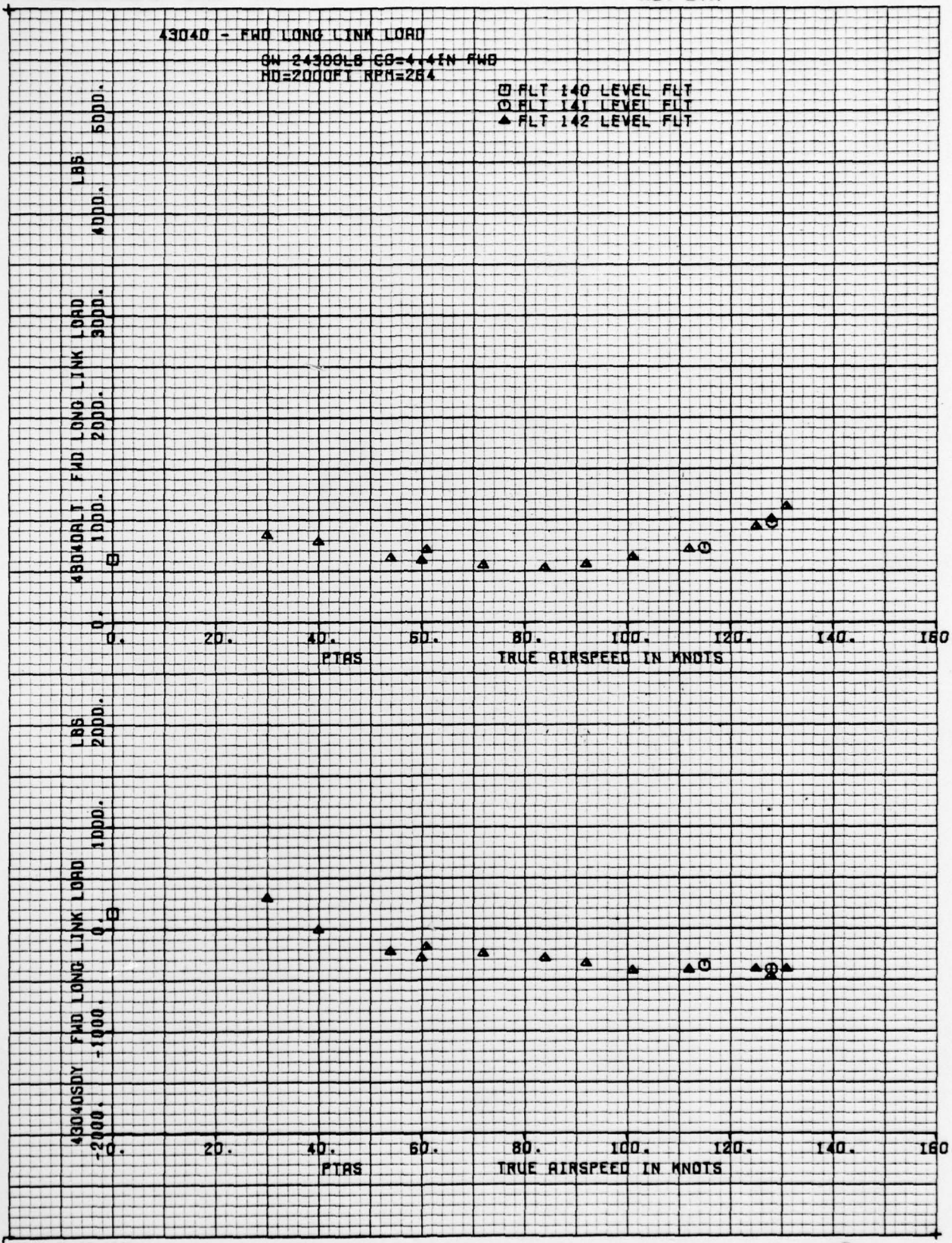
FORM 52300 (10/71)

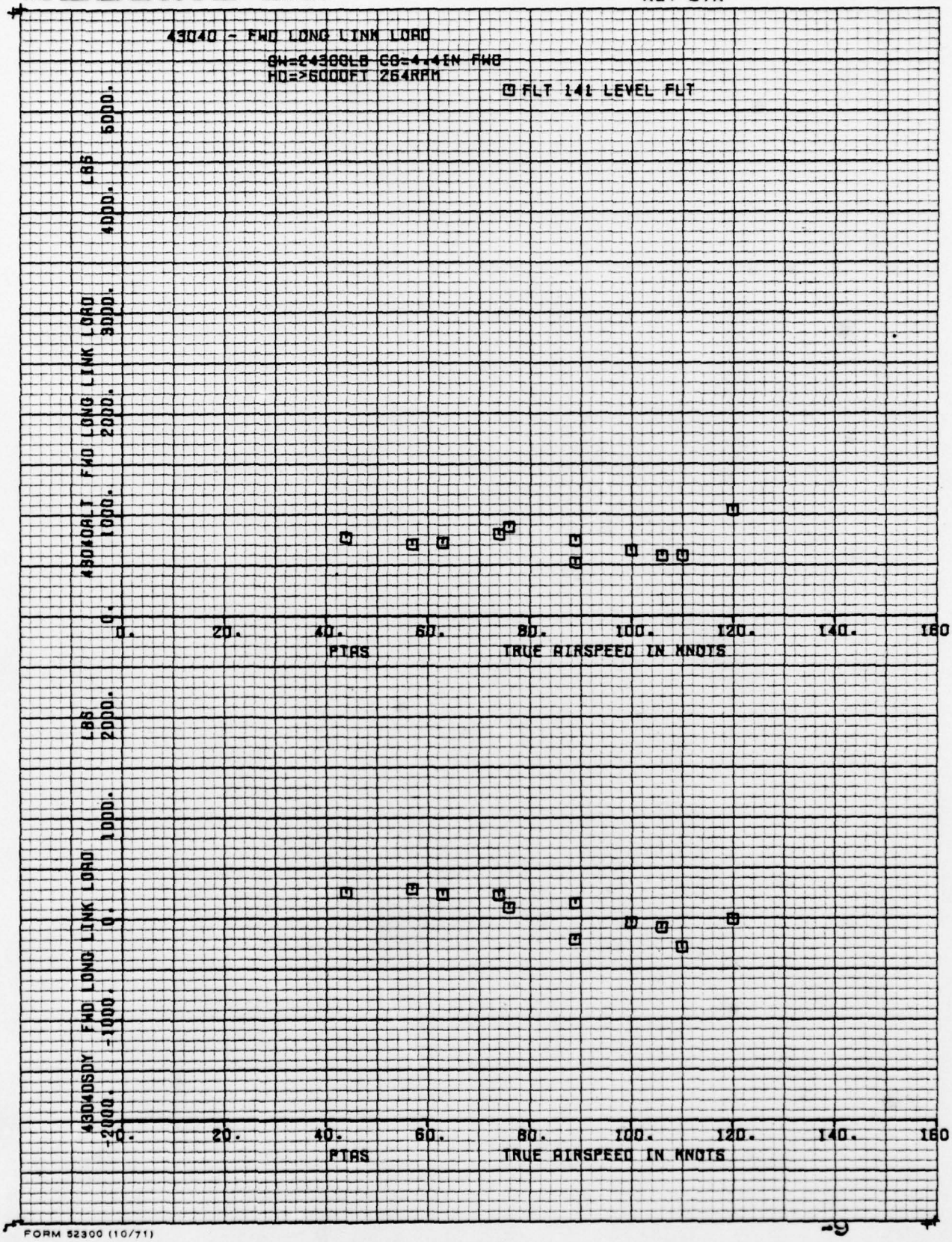
SHEET 312

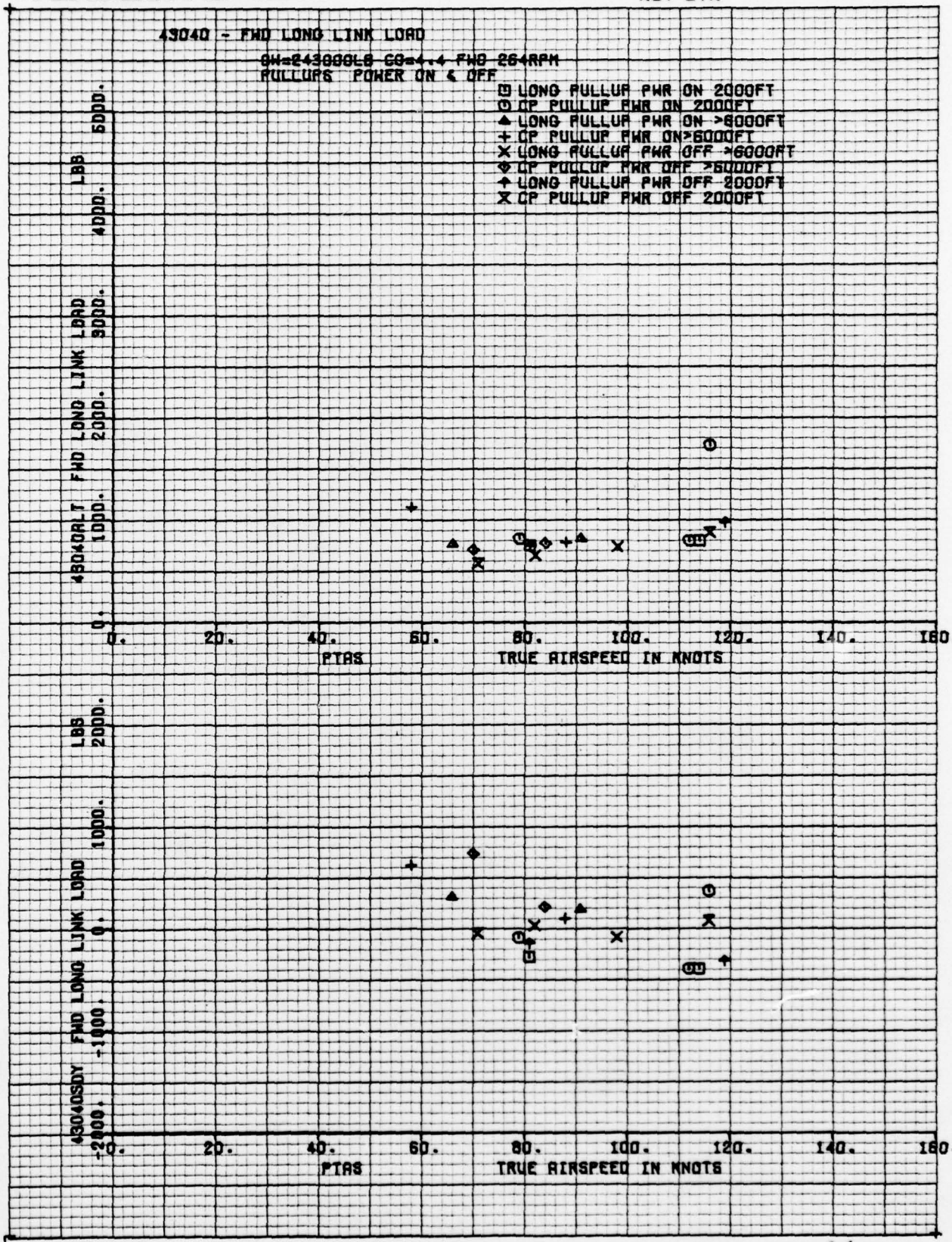

43040 - FWD LONG LINK LOAD
GW=24300LB CG=13.2IN FWD
CONTROL REV. POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
43040ALT FWD LONG LINK LOAD
LBS
6000.
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD
LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

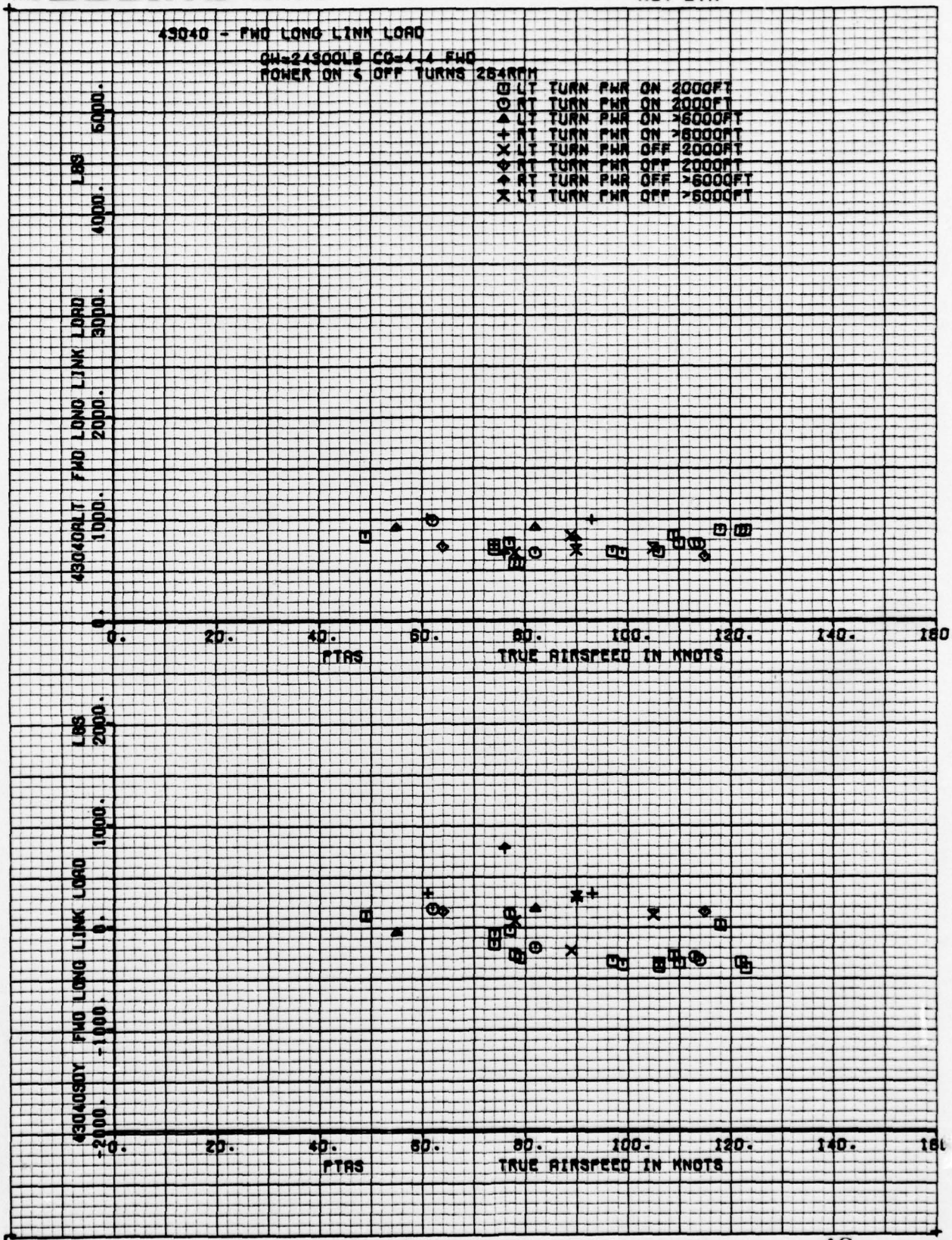

43040 - FWD LONG LINK LOAD
GW=24300LB CG=13.2IN FWD 264RPM
FLARE
SPIRAL DESCENT
43040ALT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

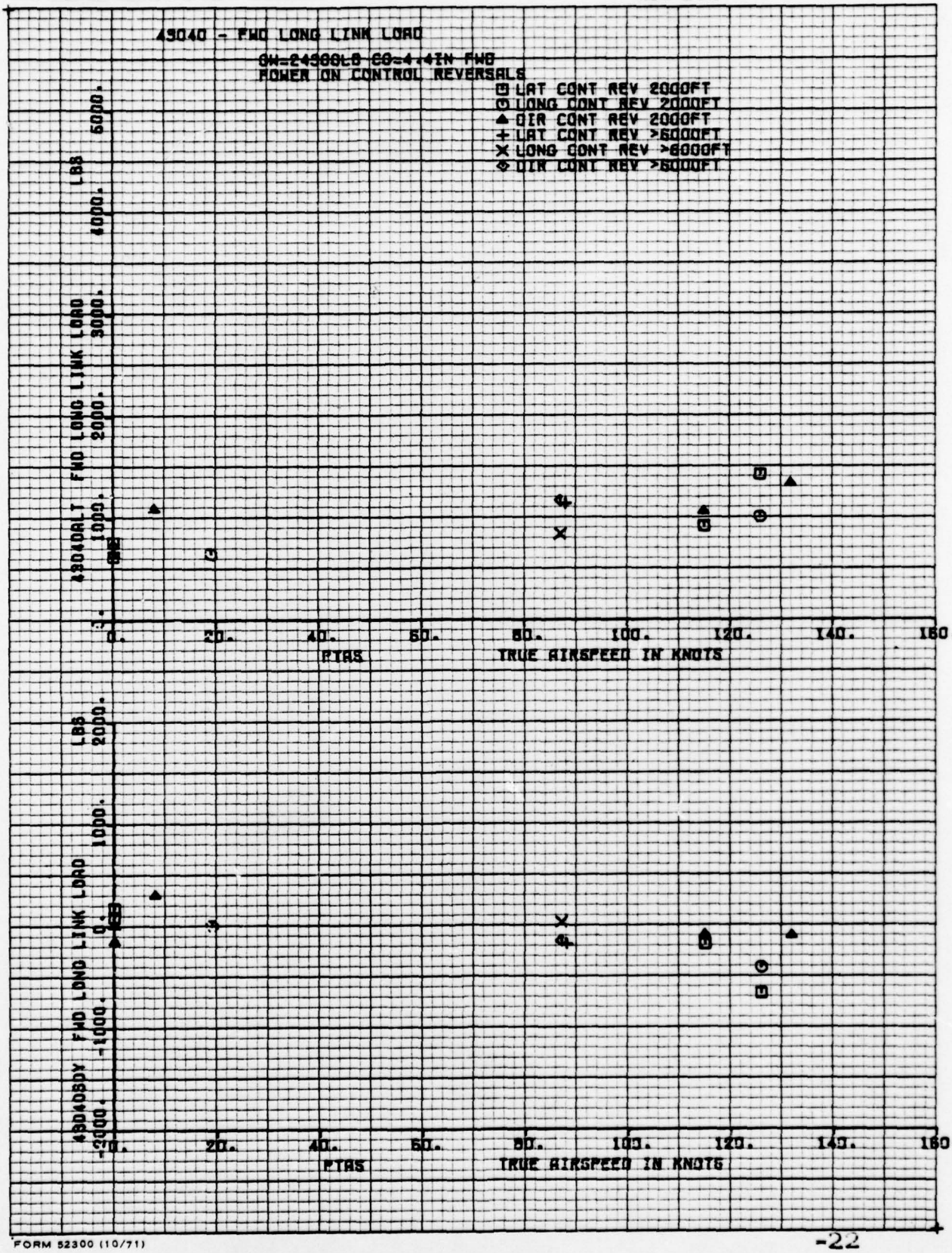

43040 - FWD LONG LINK LOAD
GW=24300LB CG=13.2IN FWD
RPD & AUTOROTATIONS
RPD 2000FT
AUTOROTATION 2000FT
RPD >6000FT
AUTOROTATION >6000FT
RPD REC 2000FT
RPD REC >6000FT
43040ALT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43040BDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

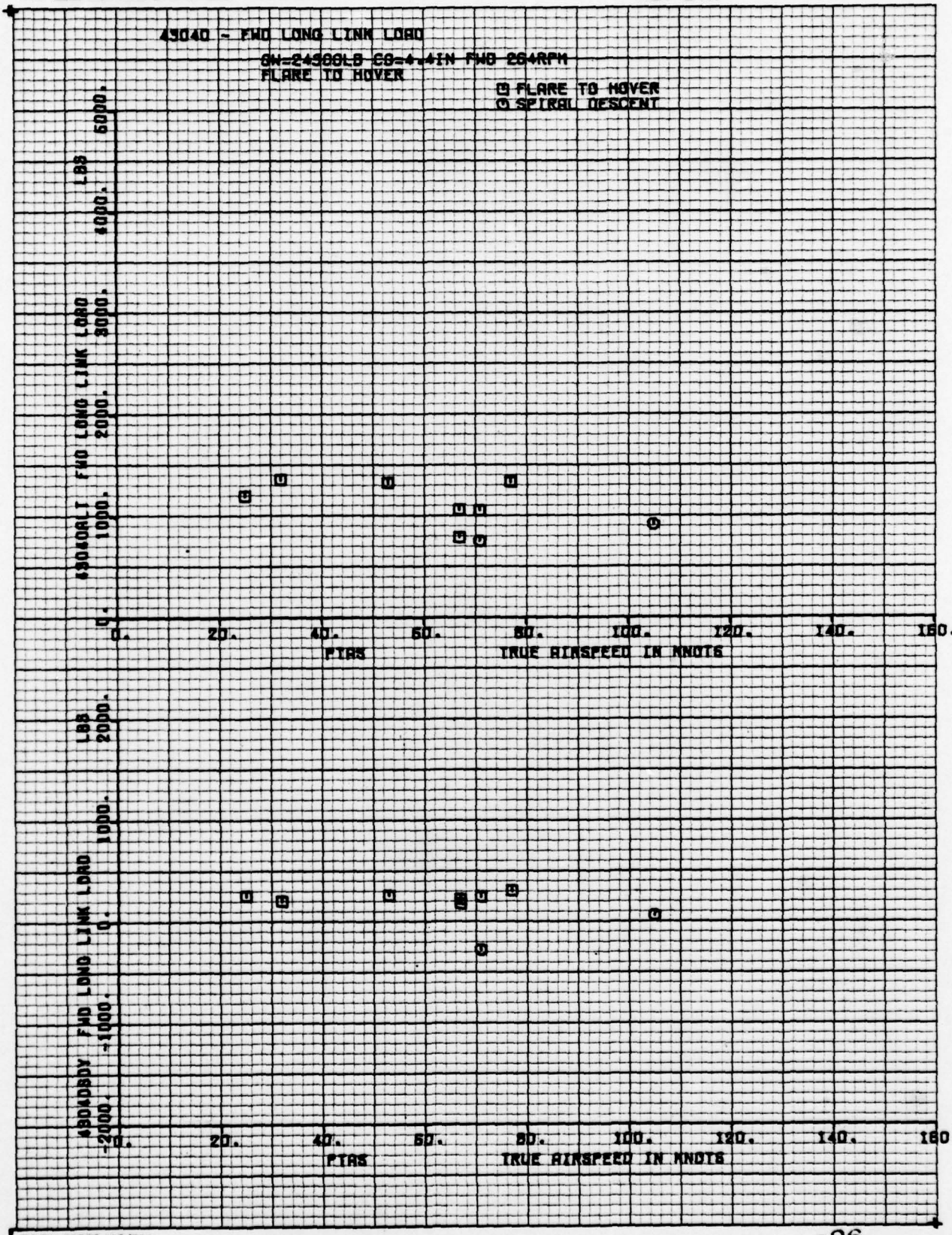

43040 - FWD LONG LINK LOAD
GW 24300LB CG=4.4IN FWD
HD=2000FT RPM=264
FLT 140 LEVEL FLT
FLT 141 LEVEL FLT
FLT 142 LEVEL FLT
43040ALT FWD LONG LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


43040 - FWD LONG LINK LOAD
GW=243000LB CG=4.4IN FWD
HO=>6000FT 264RPM
FLT 141 LEVEL FLT
43040ALT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

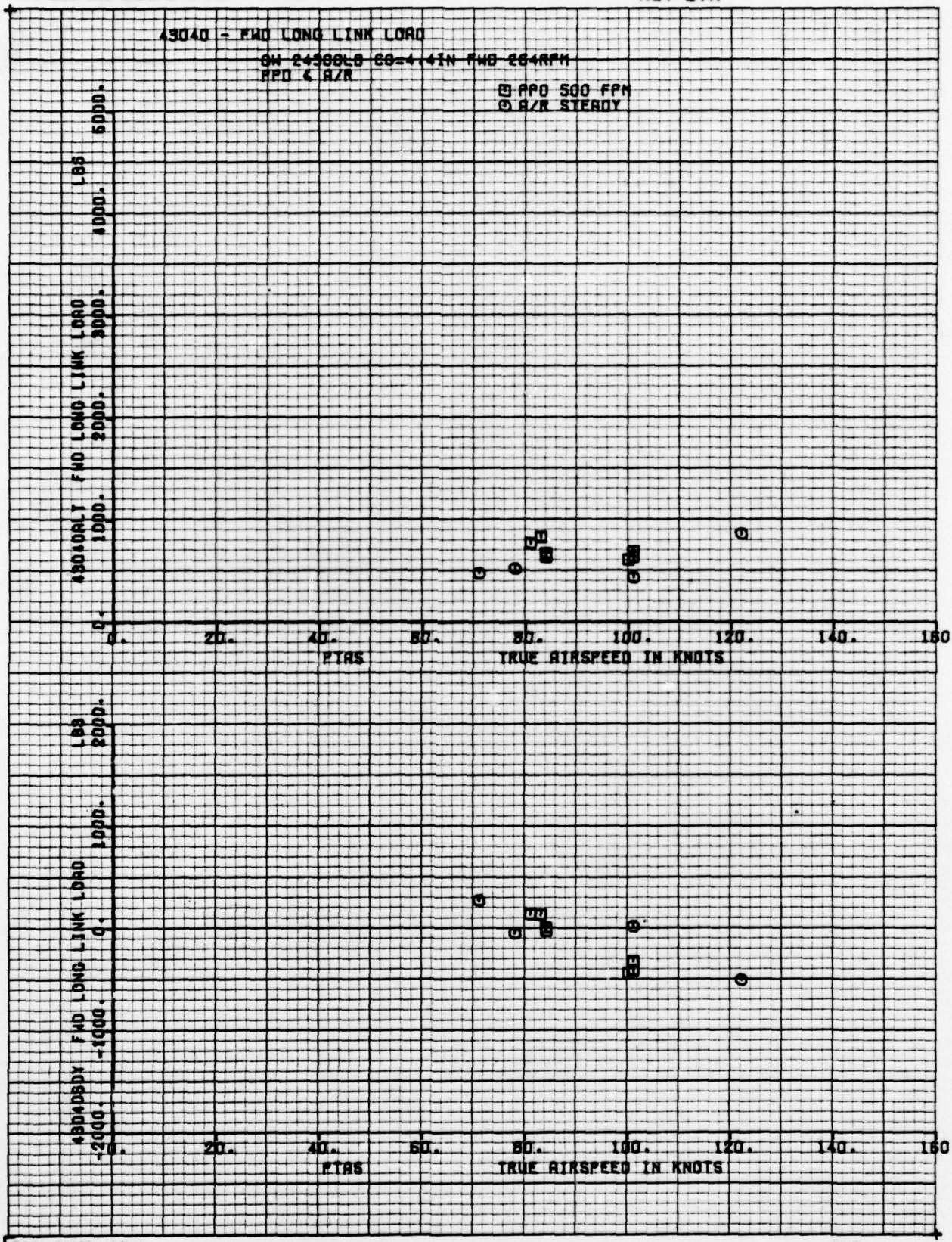

43040 - FWD LONG LINK LOAD
GW=243000LB CG=4.4 FWD 264RPM
PULLUPS POWER ON & OFF
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON>6000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
LONG PULLUP PWR OFF 2000FT
CP PULLUP PWR OFF 2000FT
43040RLT FWD LONG LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
-20.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

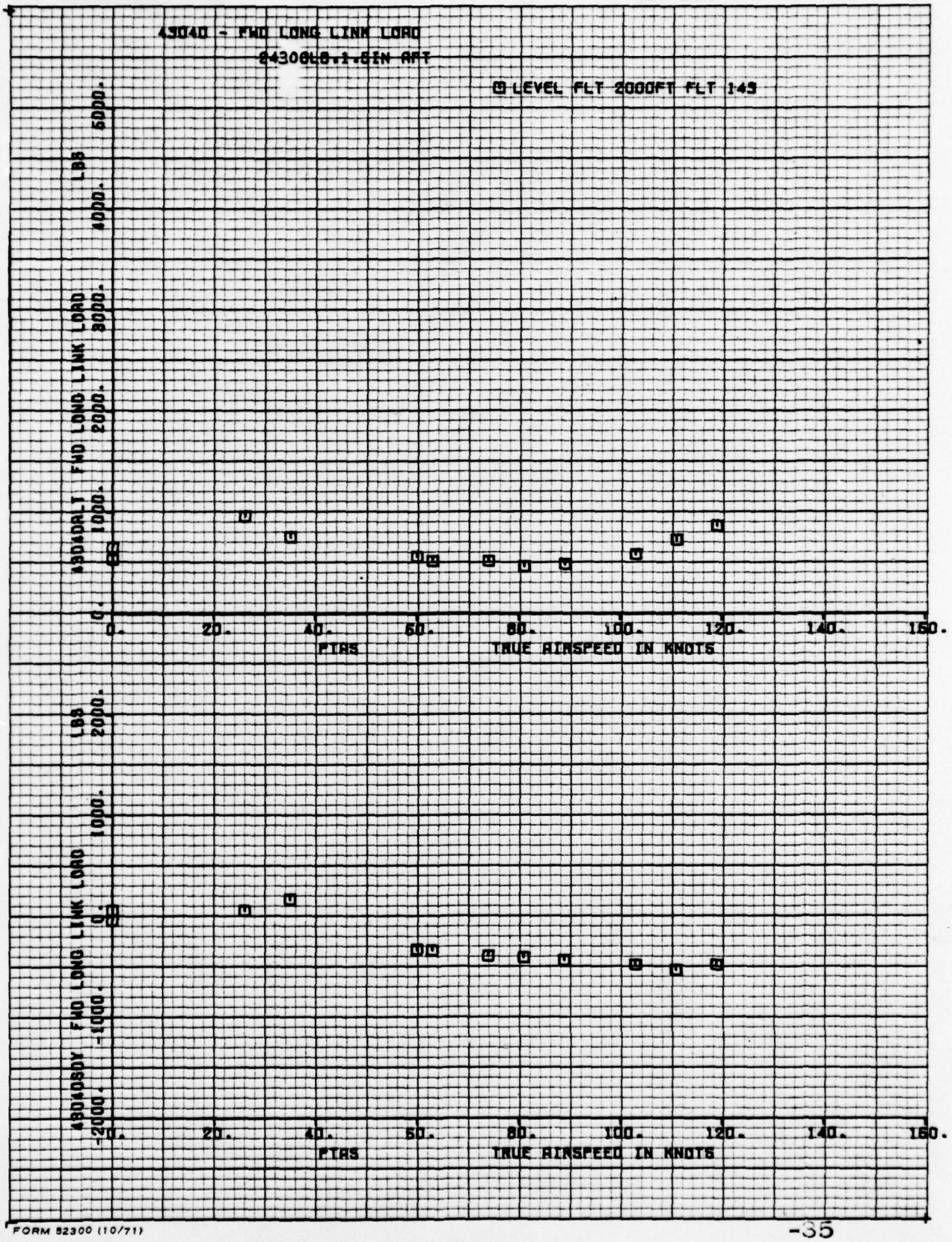

43040 - FWD LONG LINK LOAD
GW=243000LB CG=4.4 FWD
POWER ON & OFF TURNS 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
LT TURN PWR ON >6000FT
RT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
43040RLT FWD LONG LINK LOAD LBS
6000.
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS TRUE AIRSPEED IN KNOTS
43040SDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
KTAS TRUE AIRSPEED IN KNOTS


43040 - FWD LONG LINK LOAD
GW=24500LB CG=4.4IN FWD
POWER ON CONTROL REVERSALS
LAT CONT REV 2000FT
LONG CONT REV 2000FT
DIR CONT REV 2000FT
LAT CONT REV >6000FT
LONG CONT REV >6000FT
DIR CONT REV >6000FT
43040ALT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
43040BDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

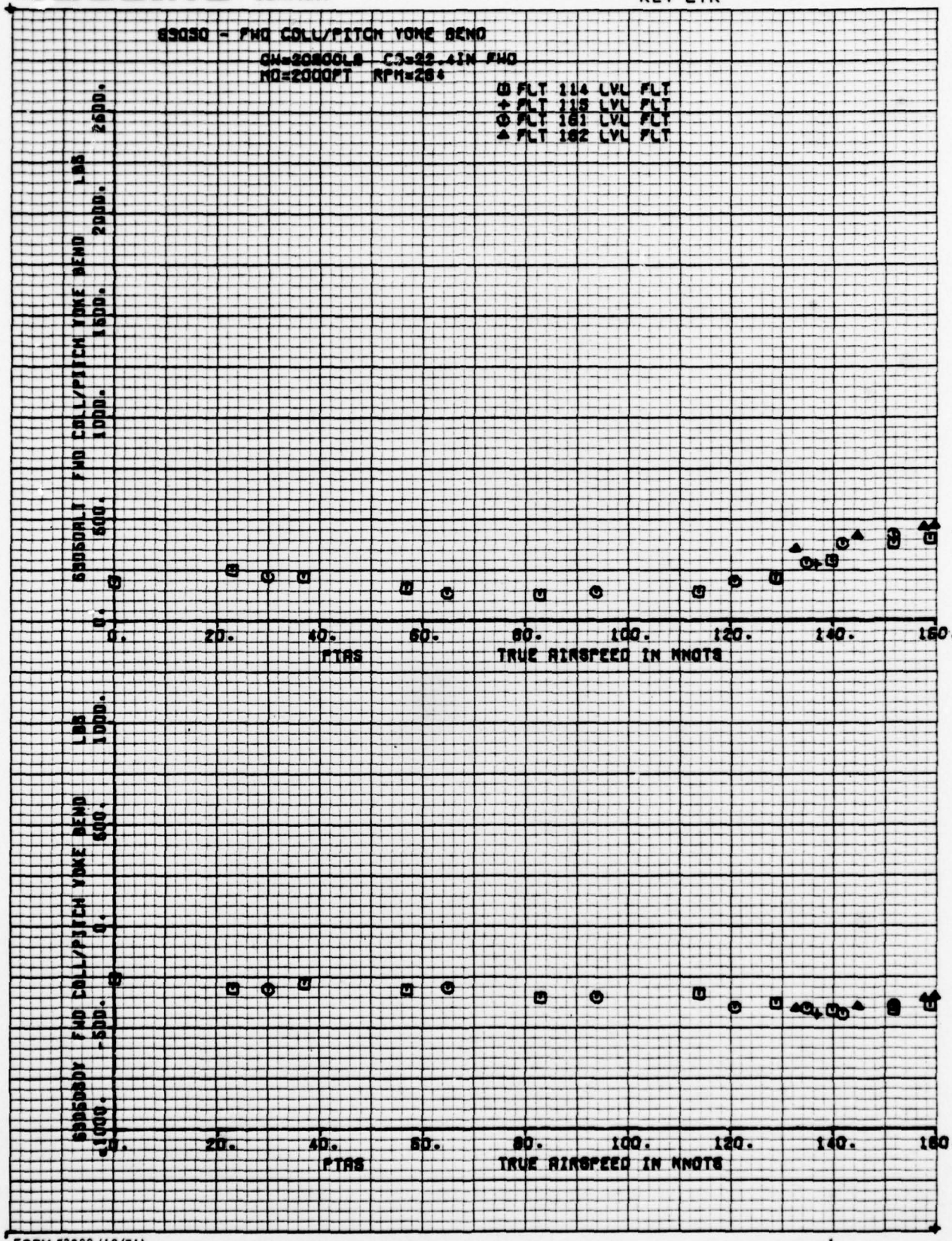

43040 - FWD LONG LINK LOAD
GW=24500LB CG=4.4IN FWD 264RPM
FLARE TO HOVER
FLARE TO HOVER
SPIRAL DESCENT
43040ALT FWD LONG LINK LOAD LBS
6000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS
43040BDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



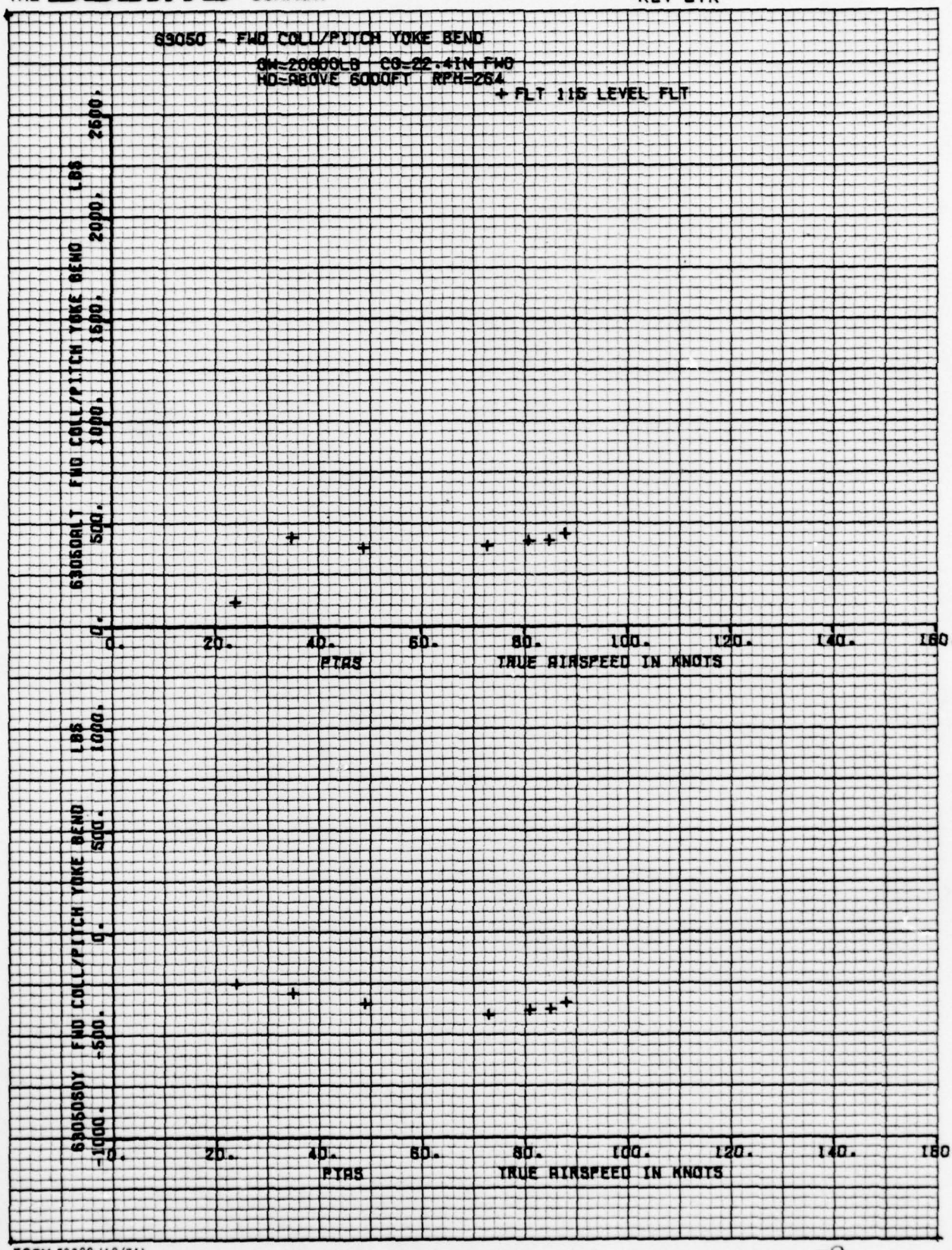

43040 - FWD LONG LINK LOAD
24306LB.1.6IN AFT
LEVEL FLT 2000FT FLT 143
43040RLT FWD LONG LINK LOAD LBS
5000.
4000.
3000.
2000.
1000.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS
43040BDY FWD LONG LINK LOAD LBS
2000.
1000.
0.
-1000.
-2000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
FIAS
TRUE AIRSPEED IN KNOTS

4.10 Forward Collective/Pitch Yoke

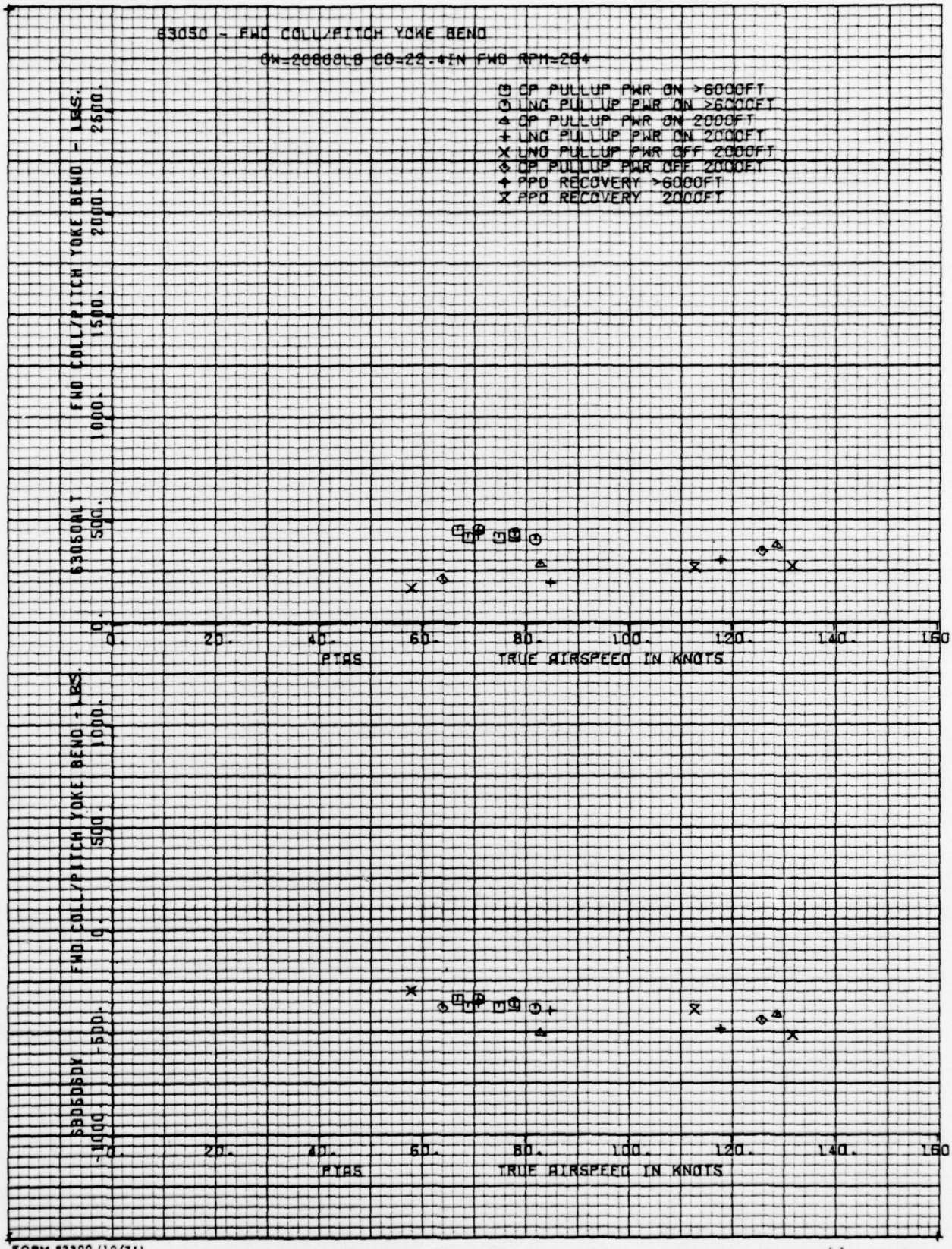


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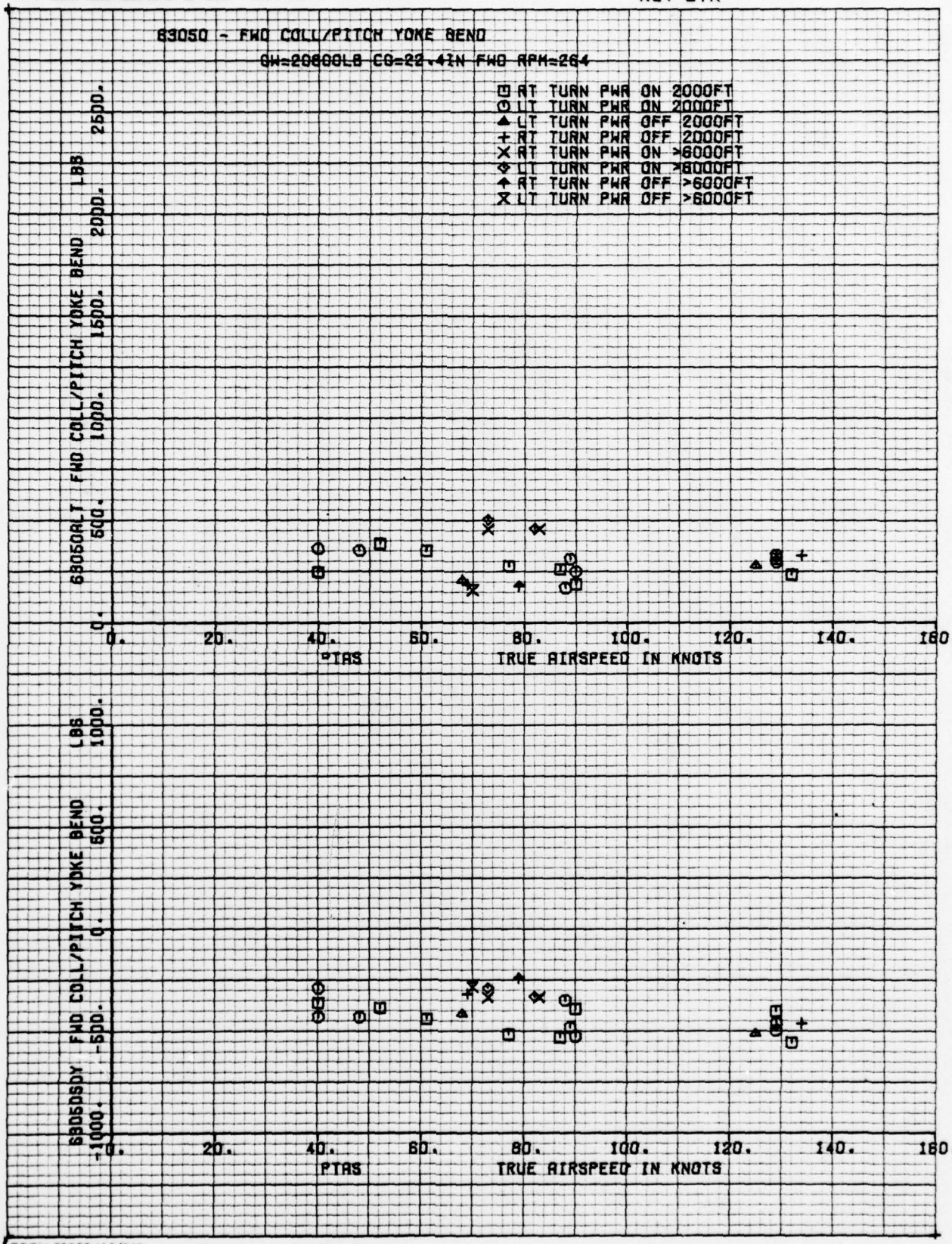
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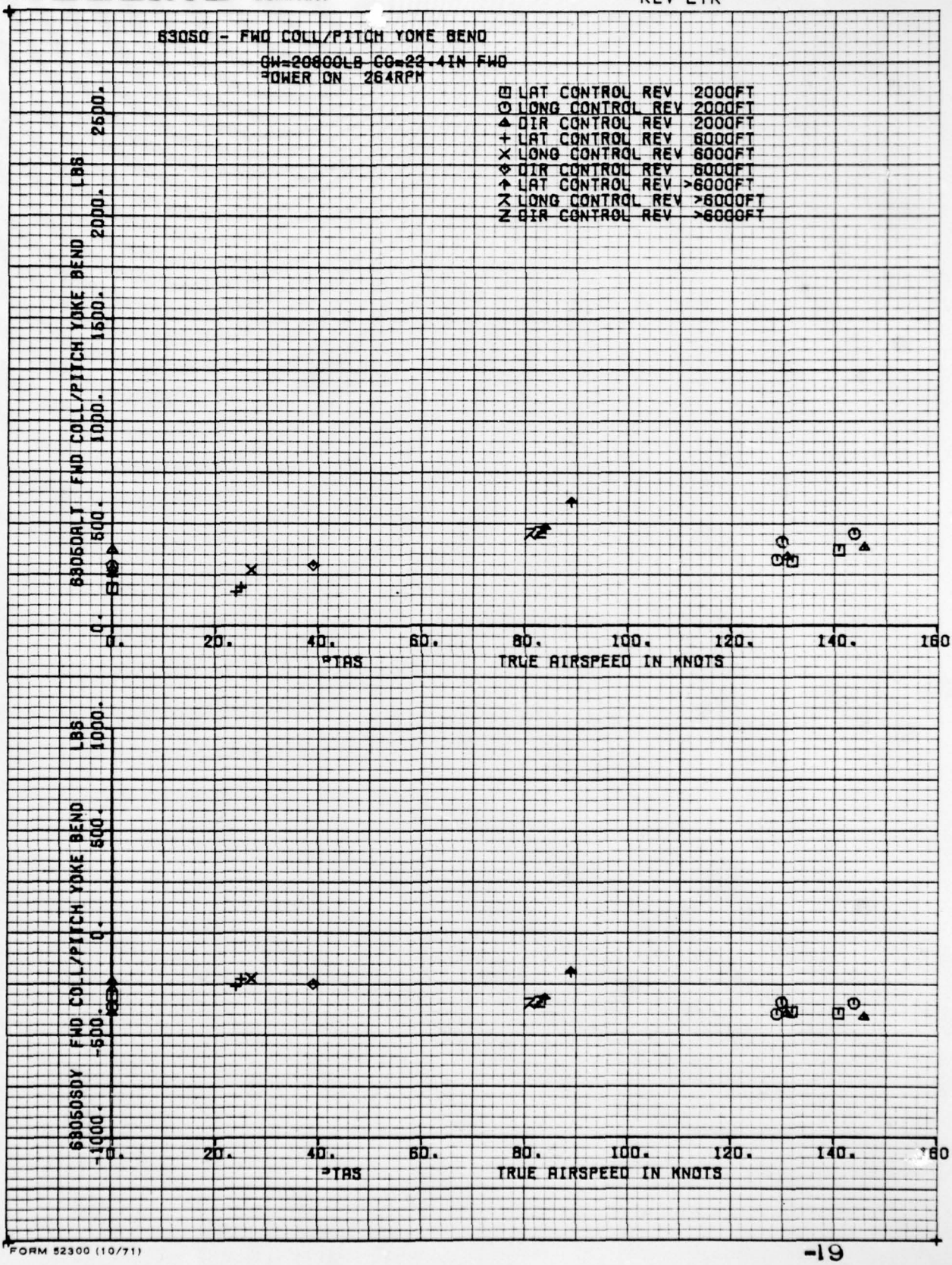

69050 - FWD COLL/PITCH YOKE BEND
GW=206000LB CG=22.4IN FWD
HD=ABOVE 6000FT RPM=264
+ FLT 115 LEVEL FLT
6305OALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS
6305OSDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS

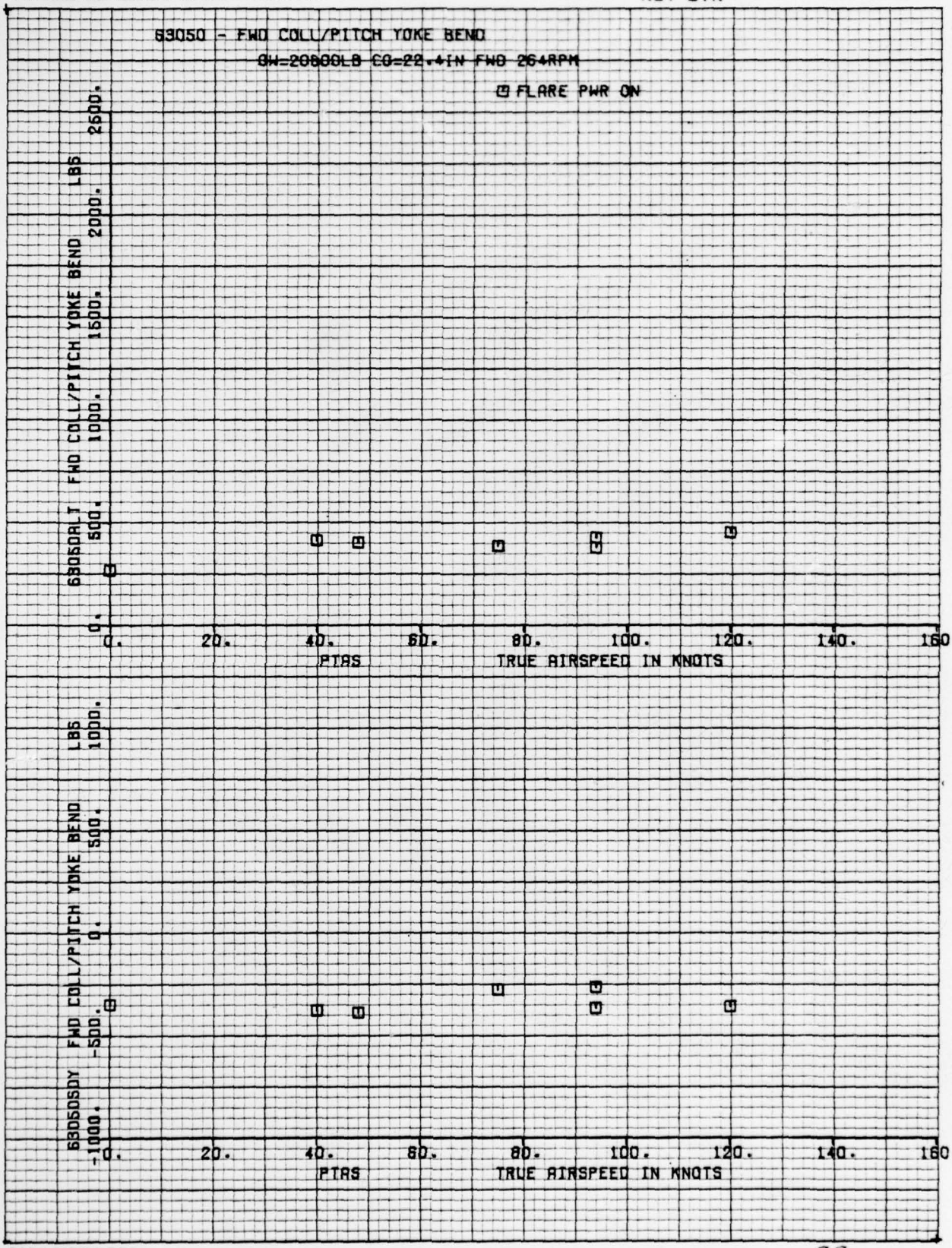
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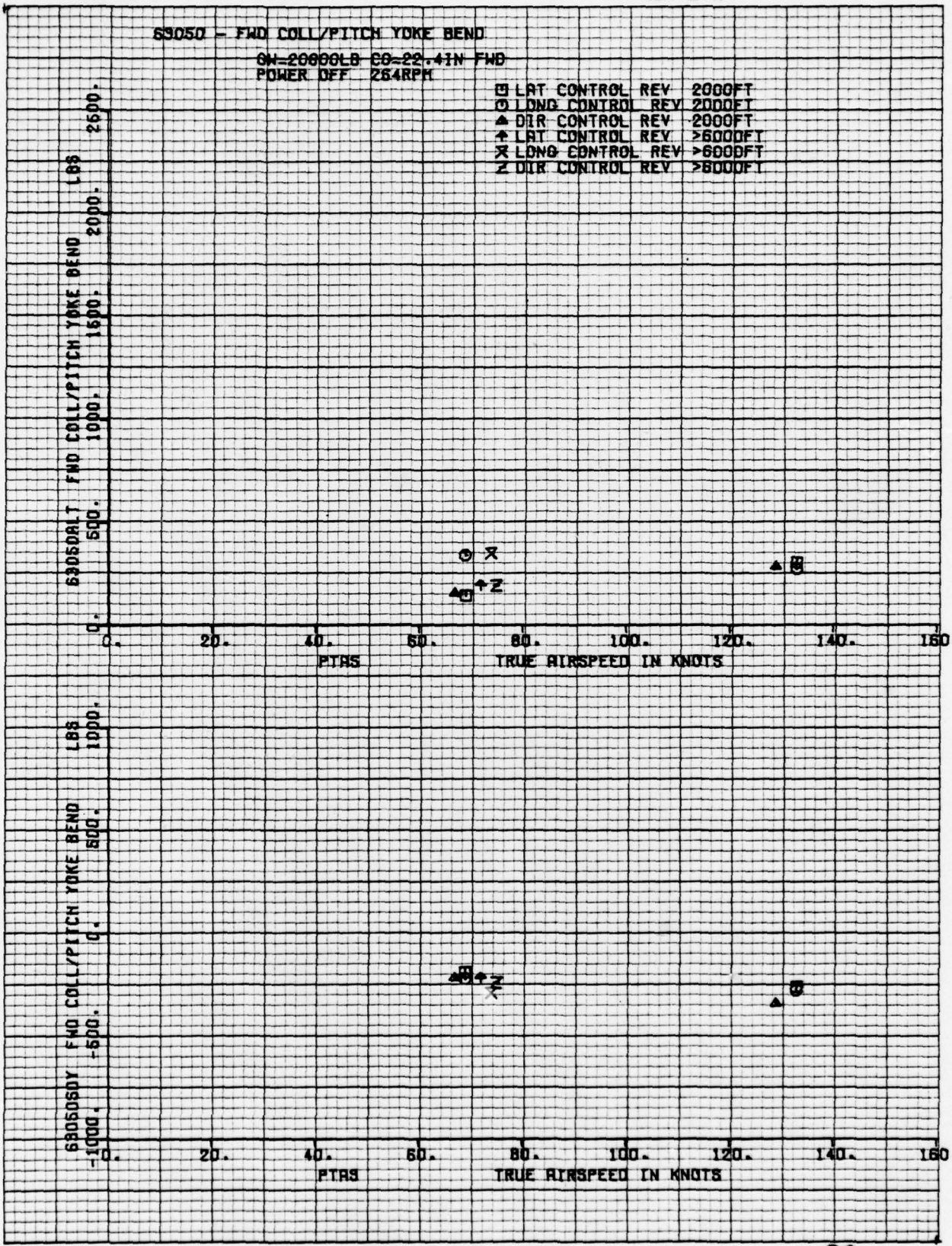


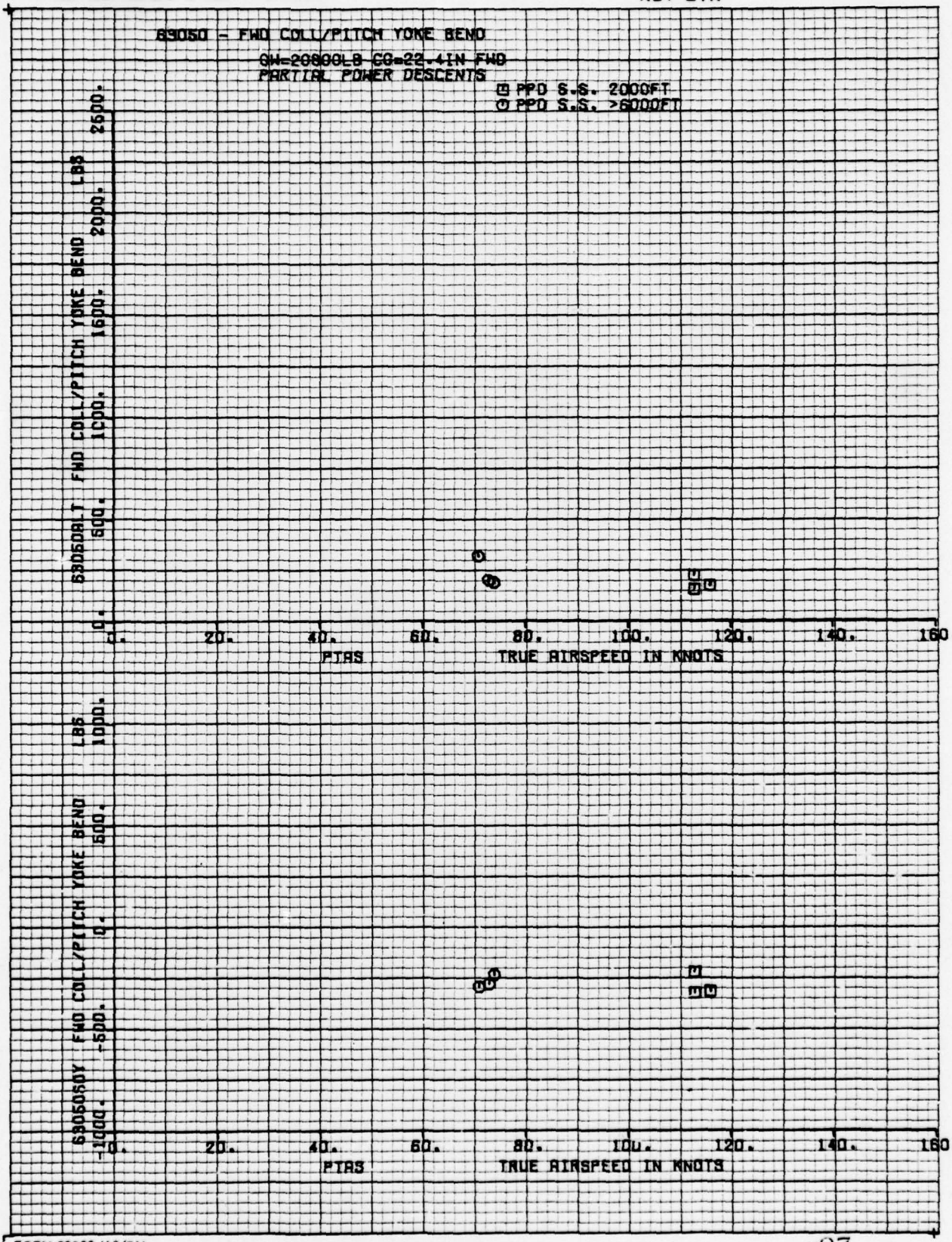
FORM 82300 (10/71)

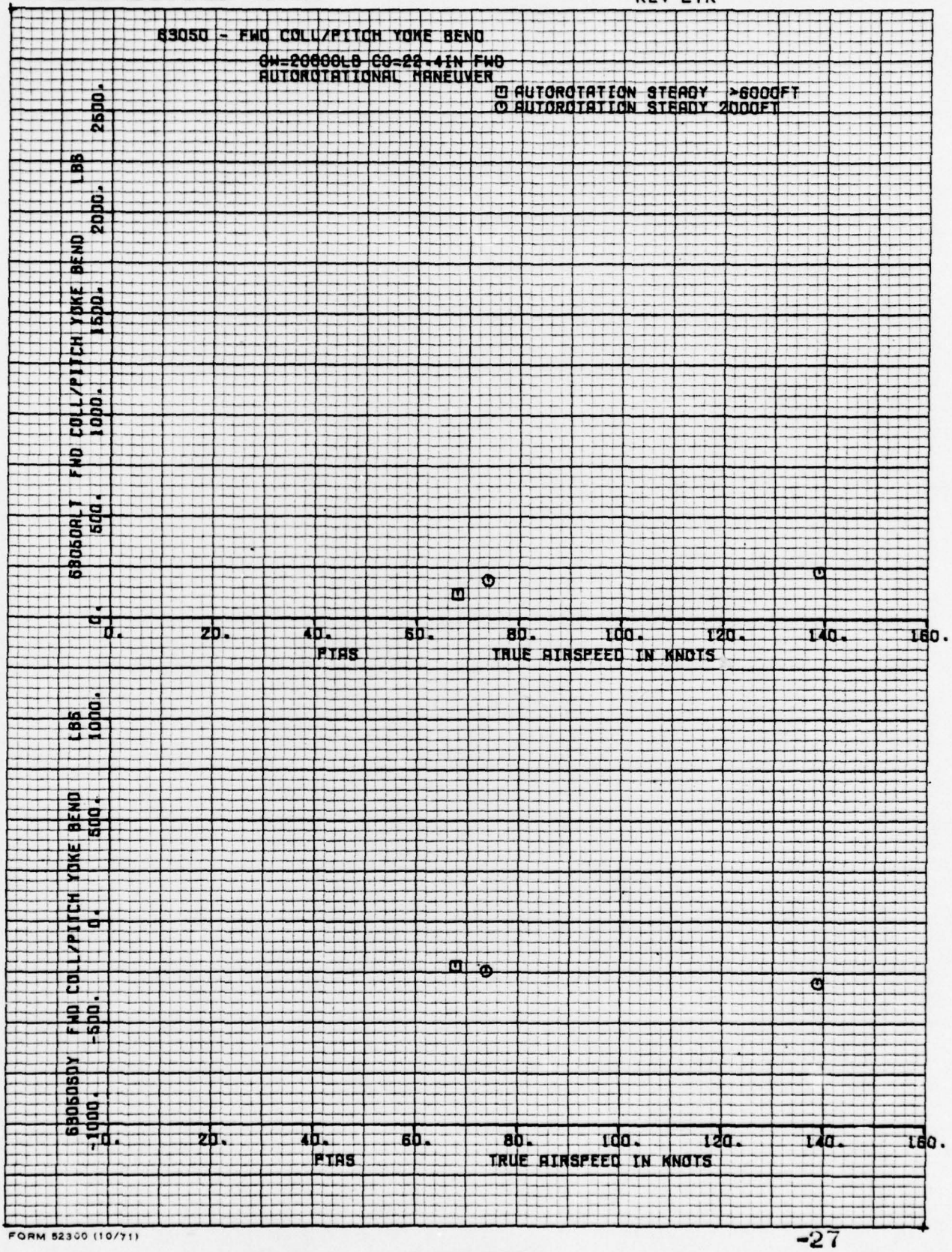

63050 - FWD COLL/PITCH YOKE BEND
GW=206000LB CG=22.4IN FWD RPM=264
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
600.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


63050 - FWD COLL/PITCH YOKE BEND
GW=20800LB CG=22.4IN FWD
POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LONG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

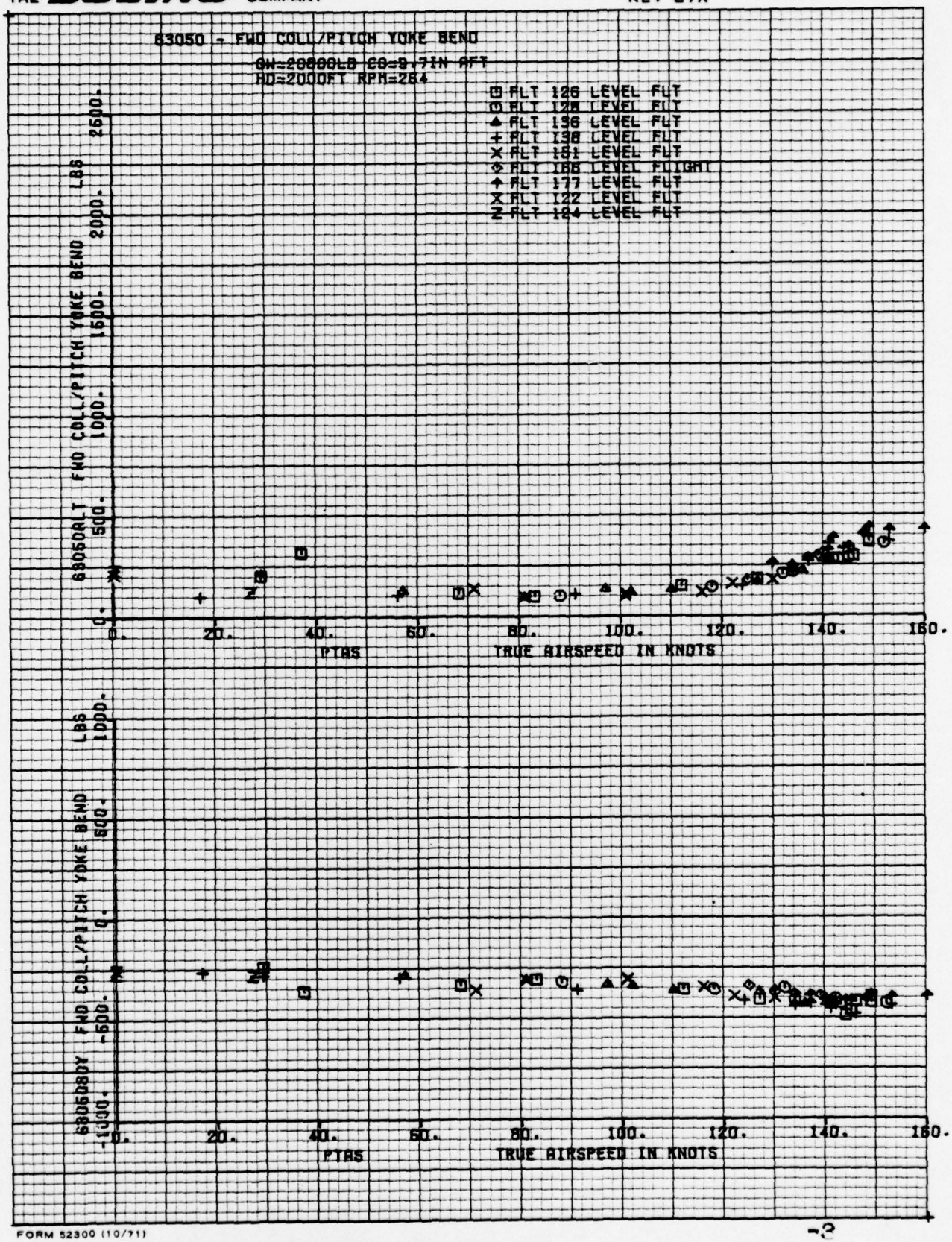

63050 - FWD COLL/PITCH YOKE BEND
GW=20800LB CG=22.4IN FWD 264RPM
FLARE PWR ON
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS


63050 - FWD COLL/PITCH YOKE BEND
GW=20000LB CG=22.41IN FWD
POWER OFF 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
63050DY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


83050 - FWD COLL/PITCH YOKE BEND
GW=208000LB CG=22.4IN FWD
PARTIAL POWER DESCENTS
PPD S.S. 2000FT
PPD S.S. >6000FT
83050ALT FWD COLL/PITCH YOKE BEND LBS
0.
600.
1000.
1600.
2000.
2500.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
83050SOY FWD COLL/PITCH YOKE BEND LBS
-1000.
-500.
0.
600.
1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

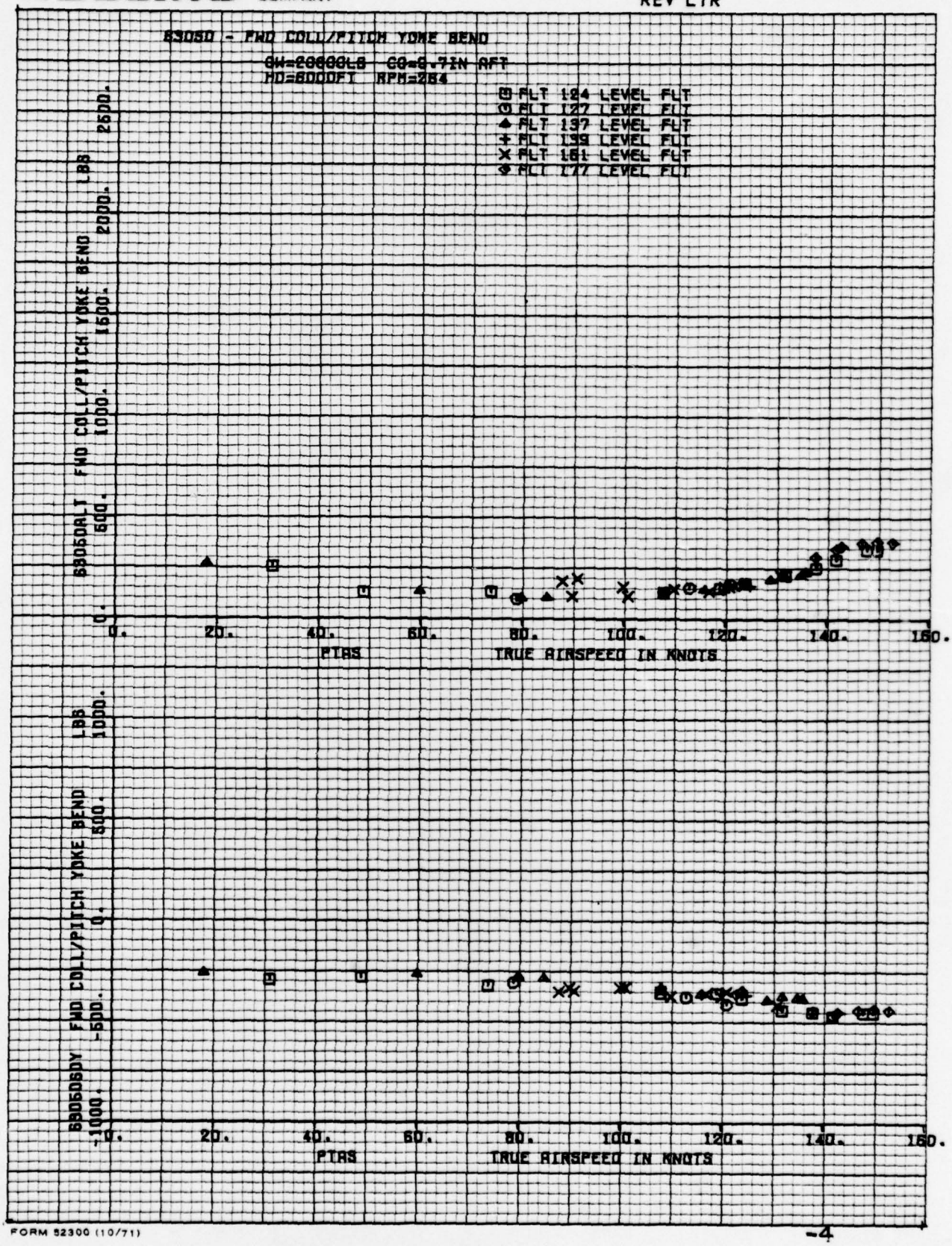

63050 - FWD COLL/PITCH YOKE BEND
GW=20000LB CG=22.4IN FWD
AUTOROTATIONAL MANEUVER
B AUTOROTATION STEADY >6000FT
C AUTOROTATION STEADY 2000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS TRUE AIRSPEED IN KNOTS
63050DY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KIAS TRUE AIRSPEED IN KNOTS

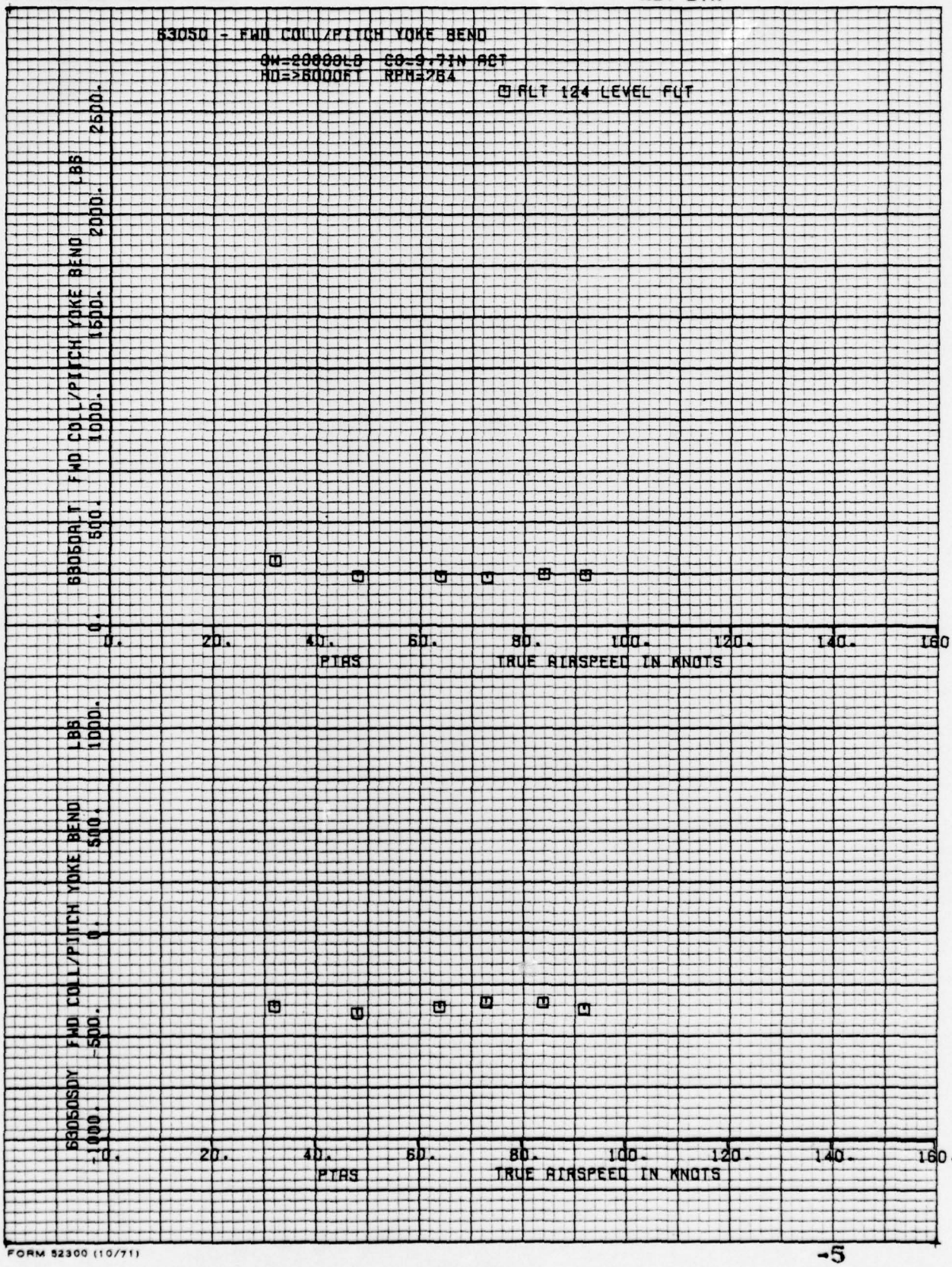
THE BOEING COMPANY



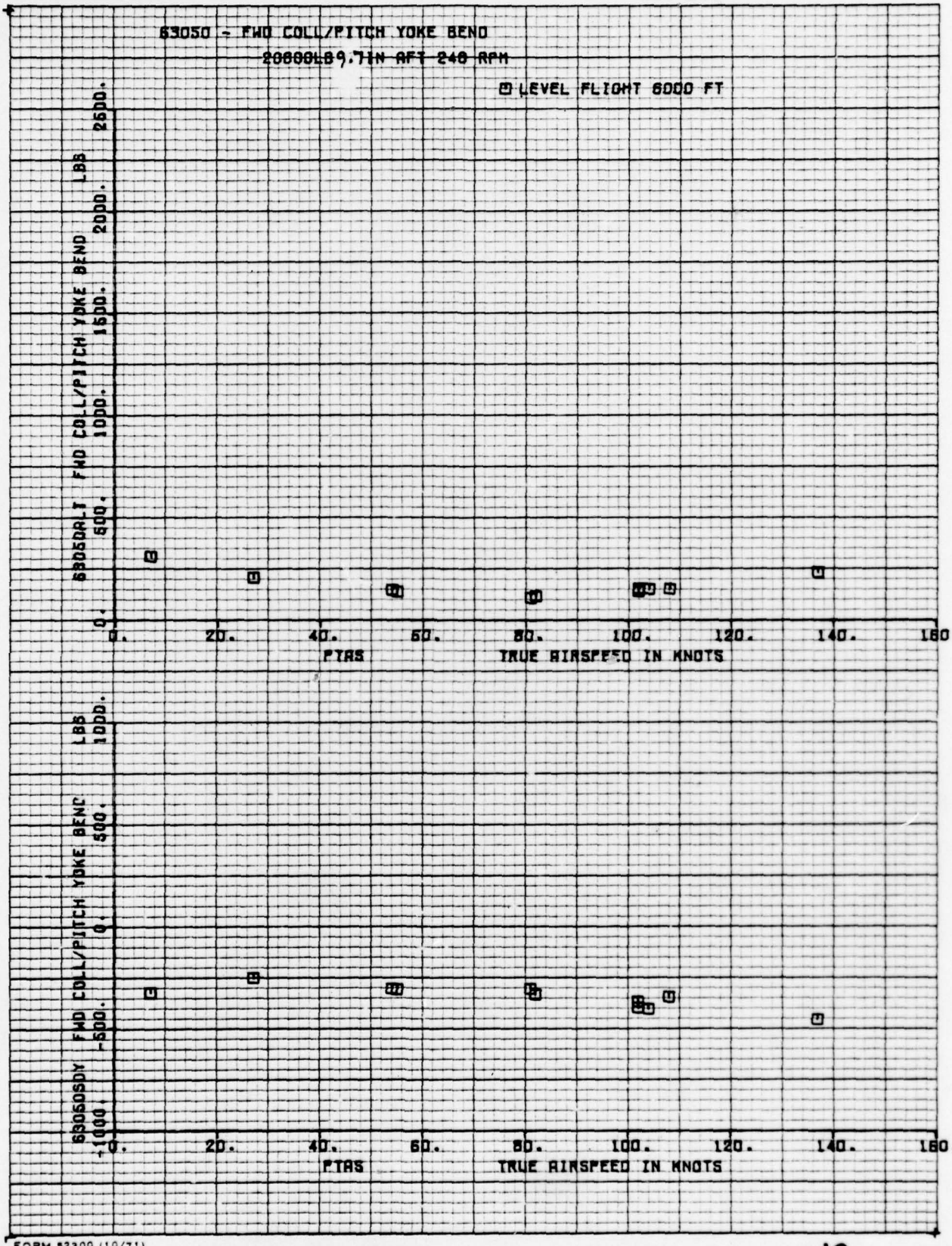
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-2

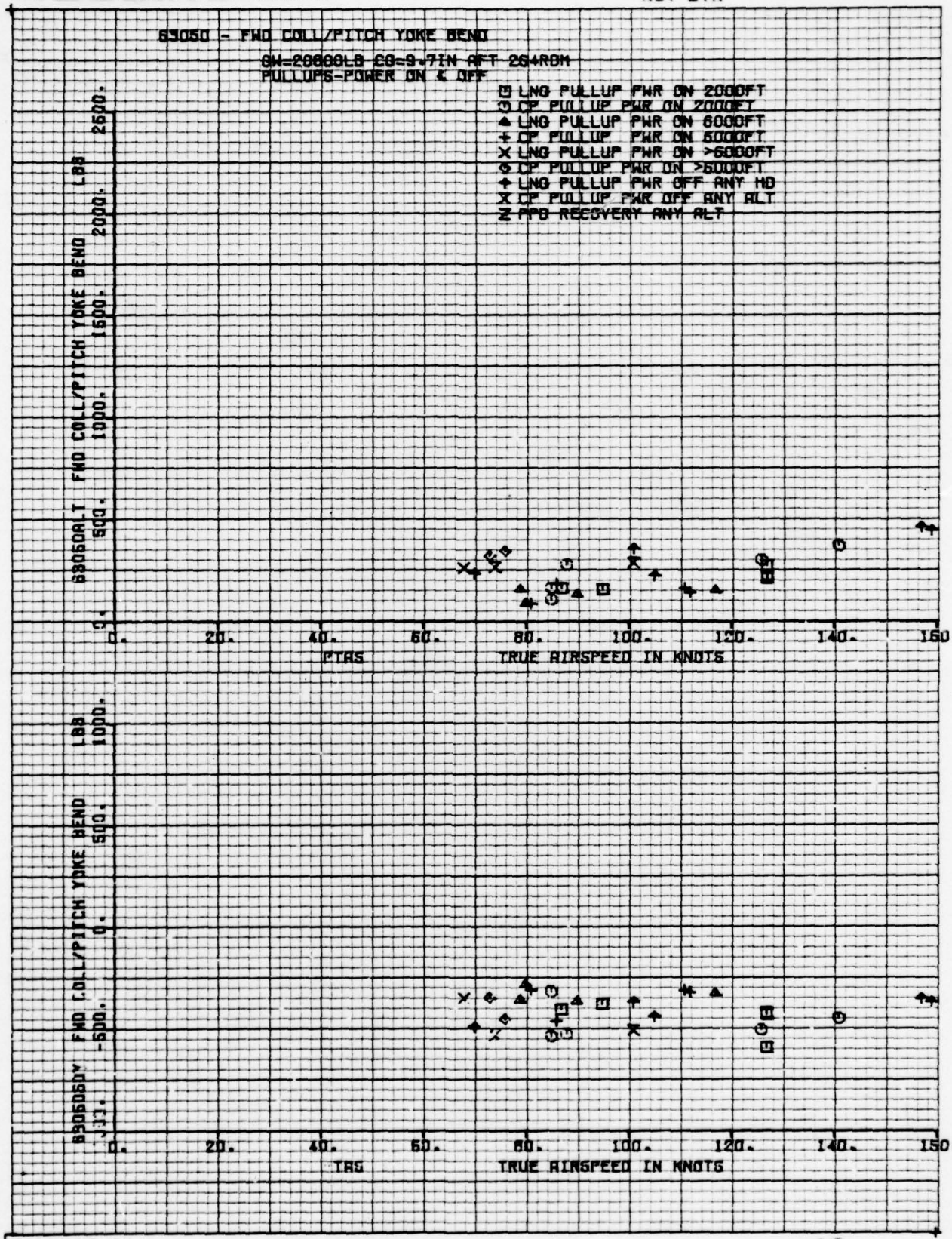

B3050 - FWD COLL/PITCH YOKE BEND
GW=230000LB CG=8.7IN AFT
HD=6000FT RPM=264
FLT 124 LEVEL FLT
FLT 127 LEVEL FLT
FLT 137 LEVEL FLT
FLT 139 LEVEL FLT
FLT 161 LEVEL FLT
FLT 177 LEVEL FLT
B3050ALT FWD COLL/PITCH YOKE BEND LBS
2600.
2000.
1600.
1000.
600.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
B3050DY FWD COLL/PITCH YOKE BEND LBS
1000.
600.
0.
-600.
-1000.
-10.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

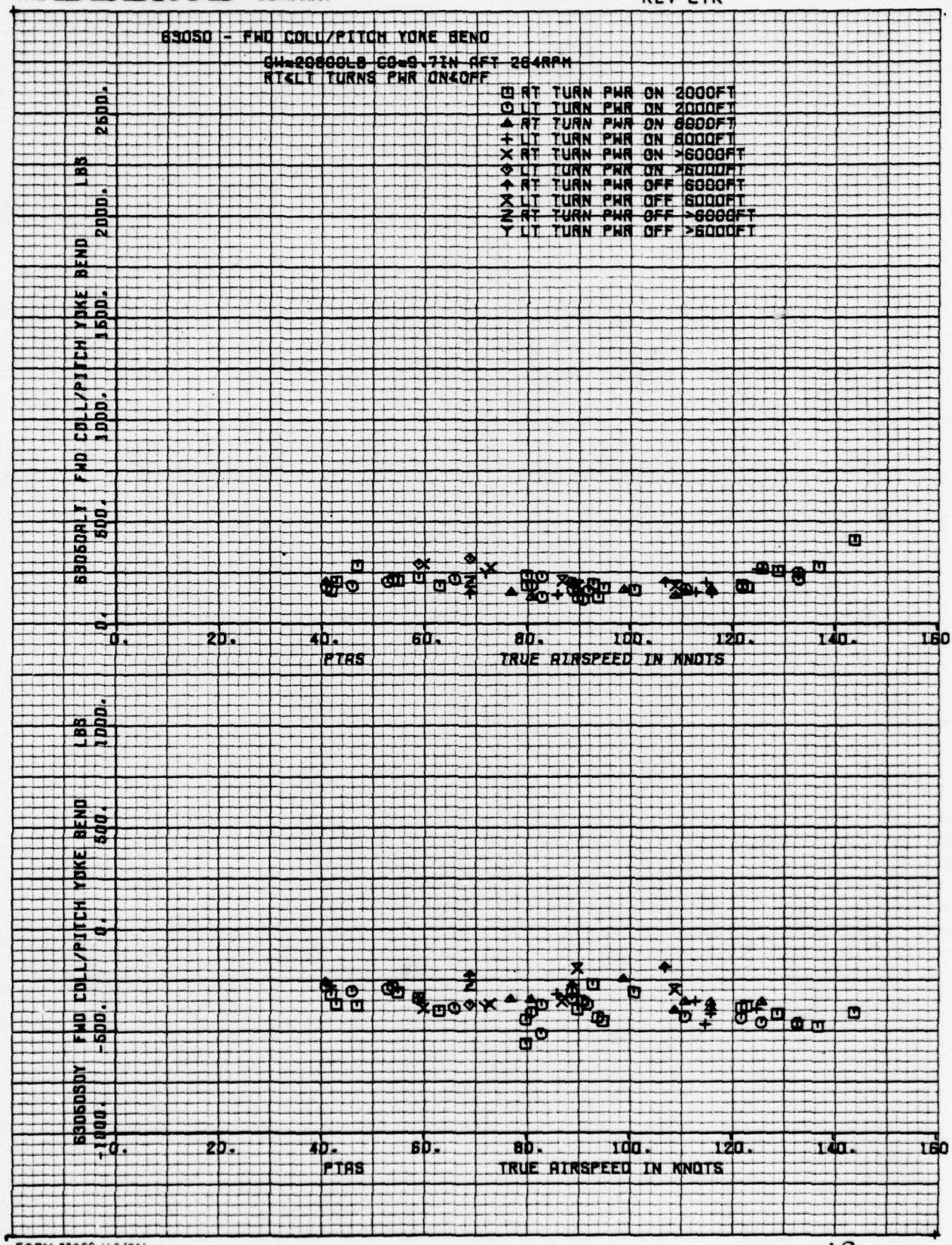

63050 - FWD COLL/PITCH YOKE BEND
GW=20000LB CG=9.71IN AFT
HD=>6000FT RPM=784
FLT 124 LEVEL FLT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS TRUE AIRSPEED IN KNOTS

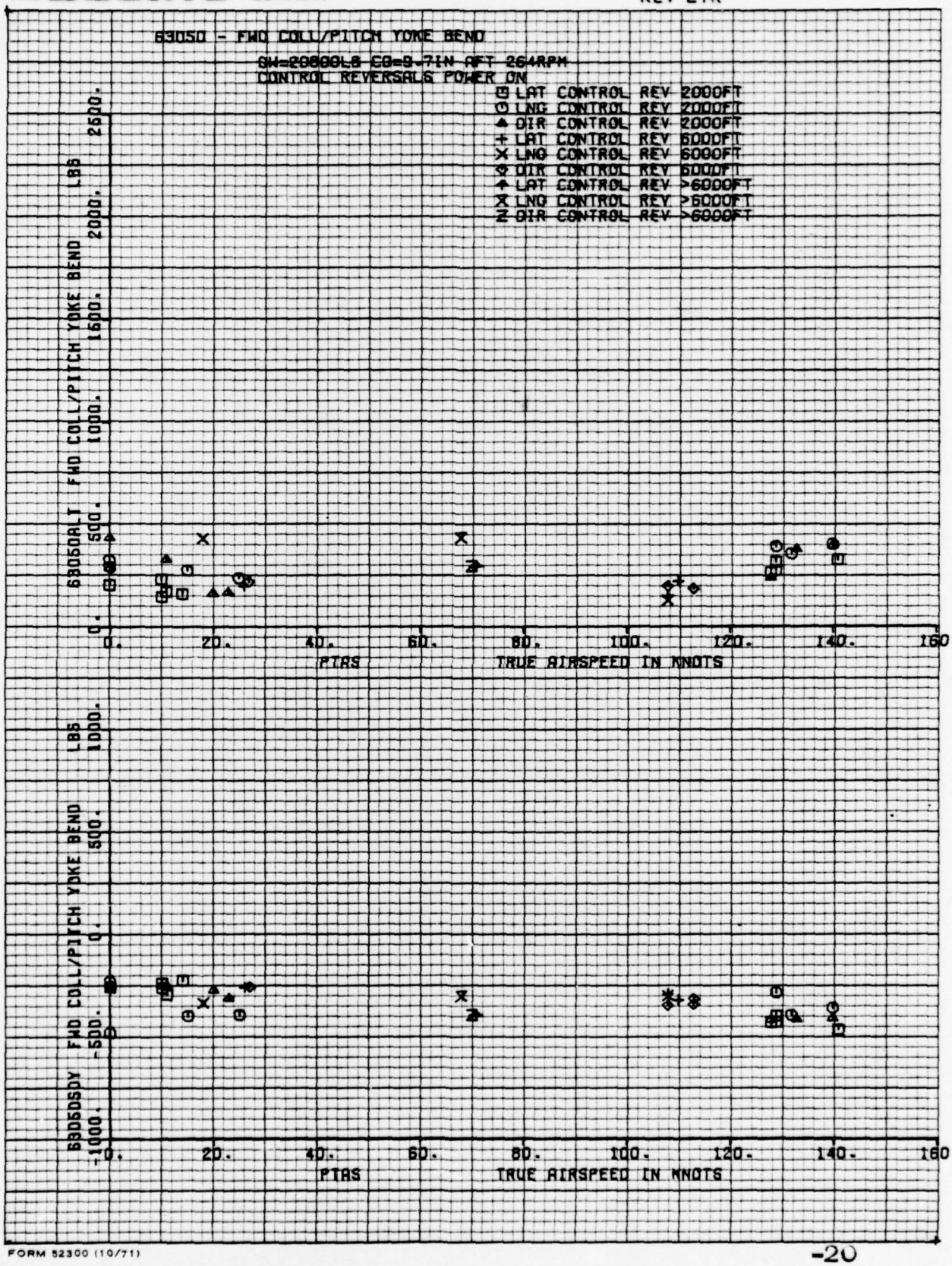
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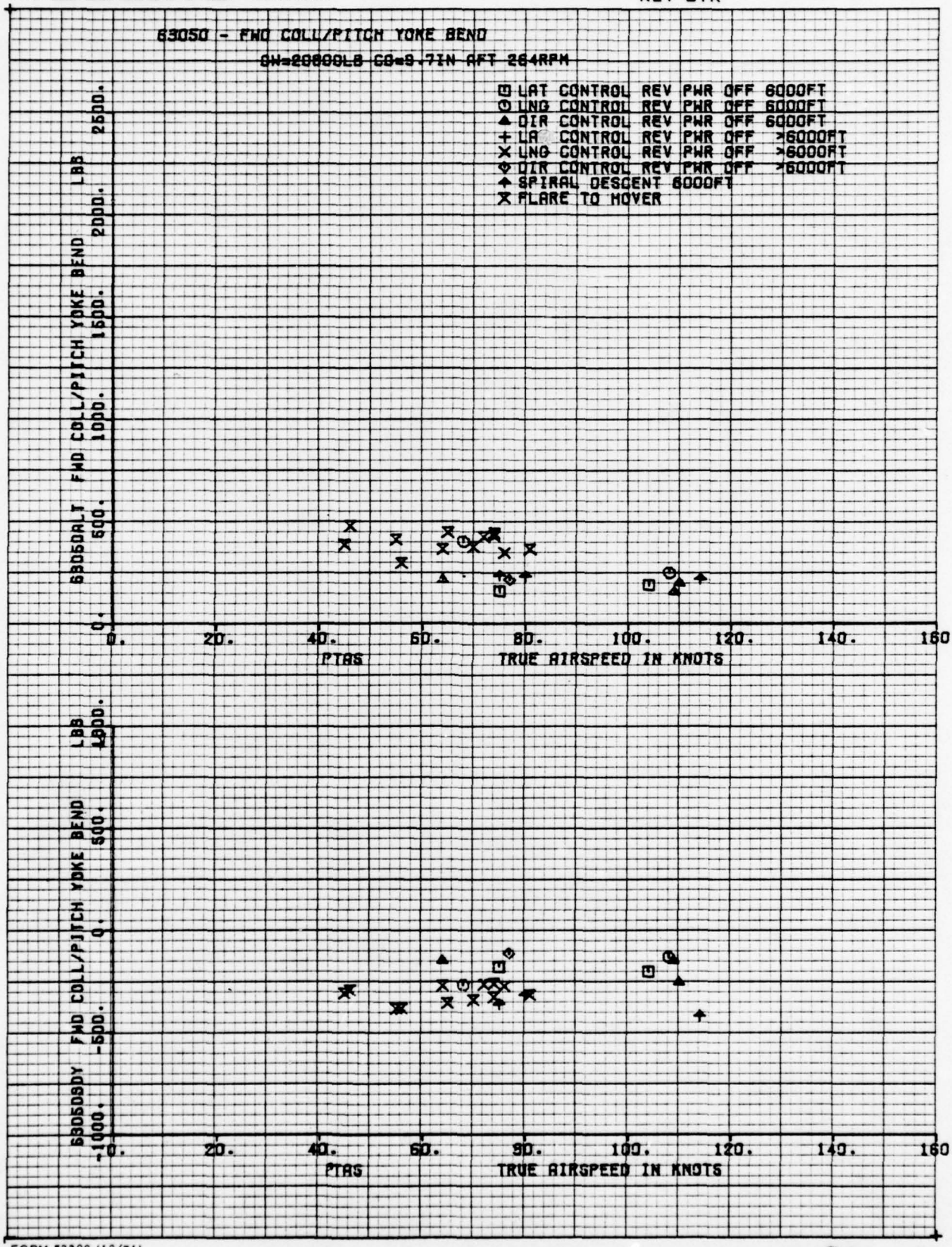


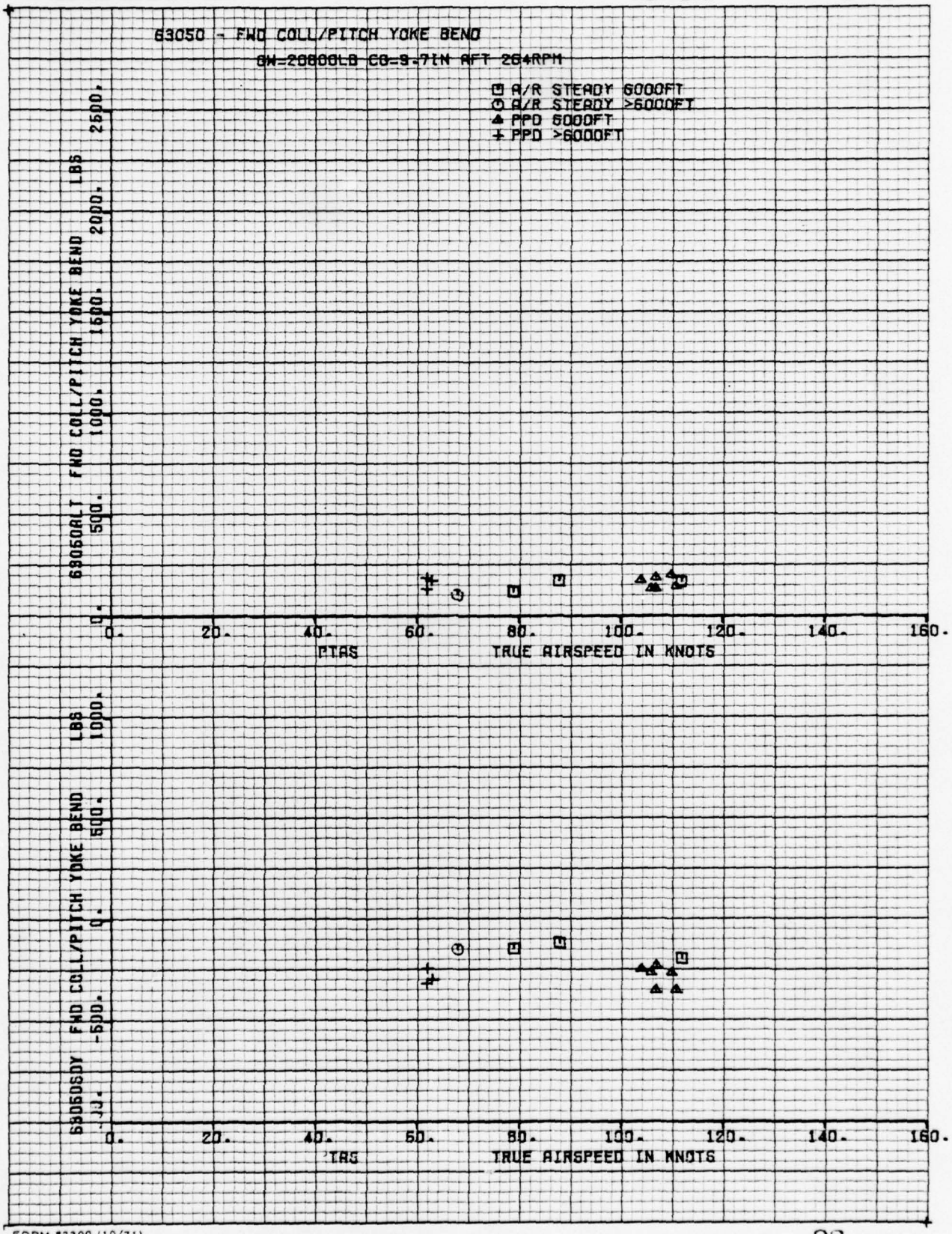
FORM 52300 (10/71)

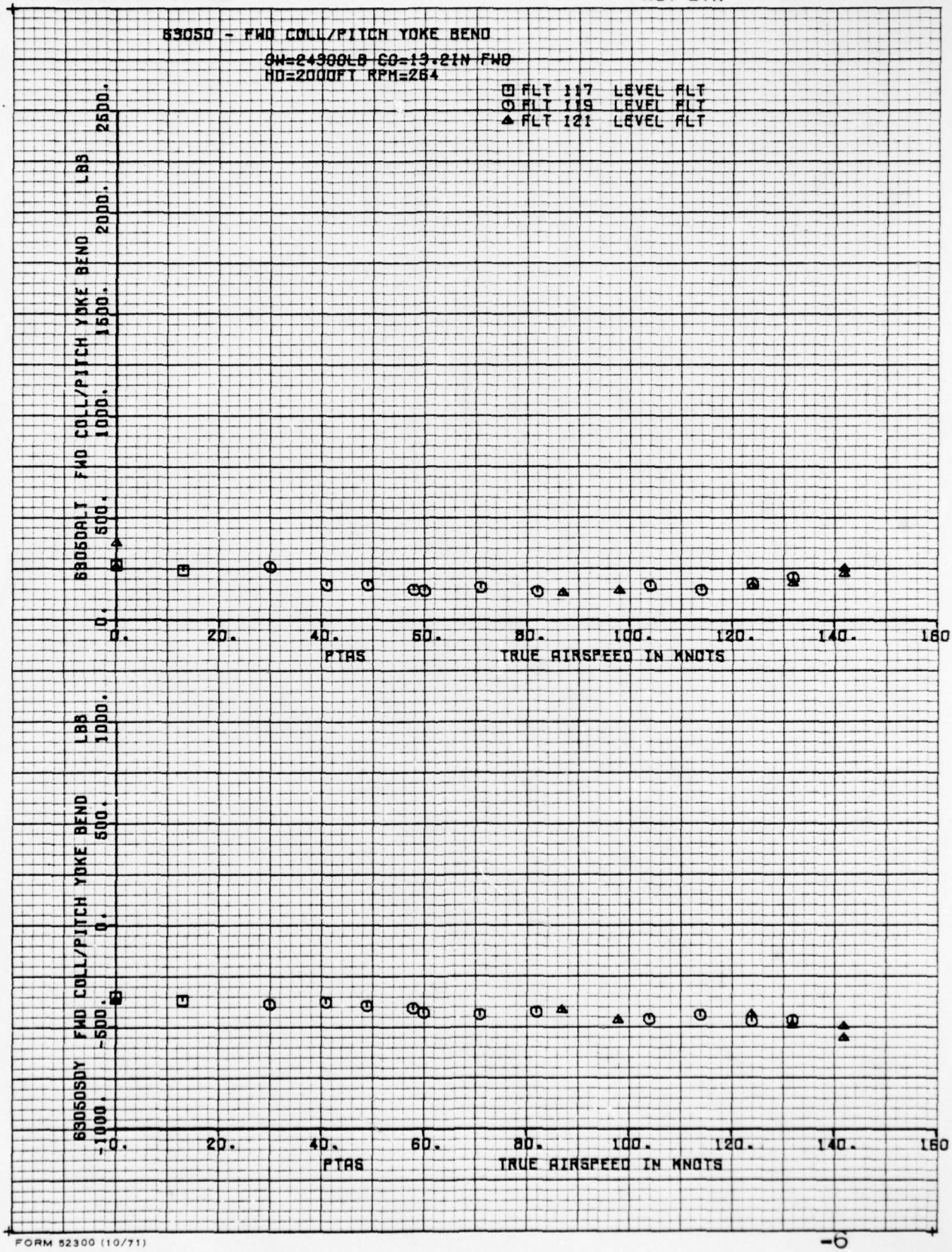

83050 - FWD COLL/PITCH YOKE BEND
GW=20000LB CG=9.7IN AFT 2R4RBM
PULLUPS-POWER ON & OFF
LNG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LNG PULLUP PWR ON 6000FT
CP PULLUP PWR ON 6000FT
LNG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
LNG PULLUP PWR OFF ANY HD
CP PULLUP PWR OFF ANY ALT
PPB RECOVERY ANY ALT
83050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
83050DV FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
TAS
TRUE AIRSPEED IN KNOTS

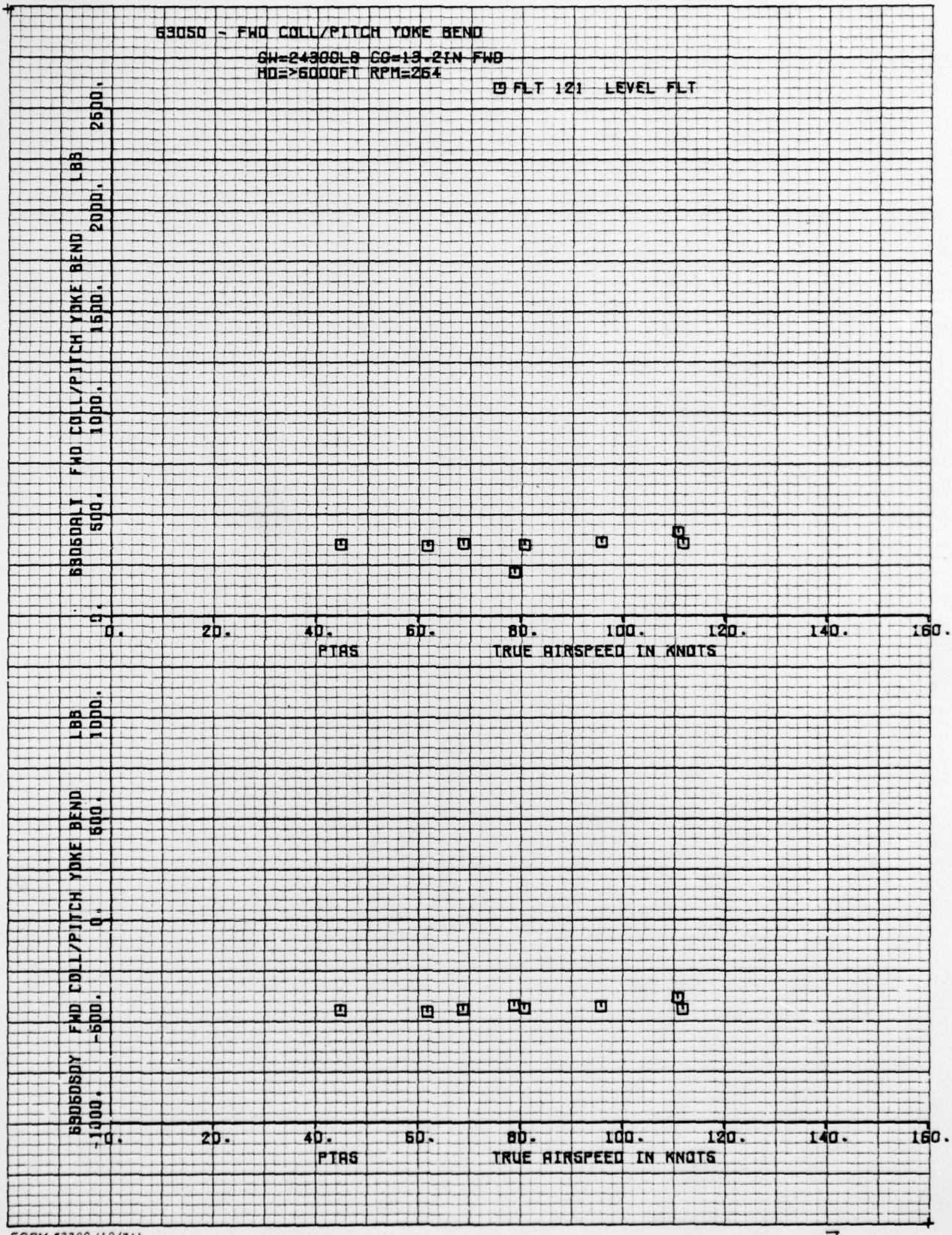

63050 - FWD COLL/PITCH YOKE BEND
GW=208000LB CG=9.7IN AFT 264RPM
RT<LT TURNS PWR ON<OFF
RT TURN PWR ON 2000FT
LT TURN PWR ON 2000FT
RT TURN PWR ON 6000FT
LT TURN PWR ON 6000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
RT TURN PWR OFF 6000FT
LT TURN PWR OFF 6000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2600.
2000.
1600.
1000.
600.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
600.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS TRUE AIRSPEED IN KNOTS

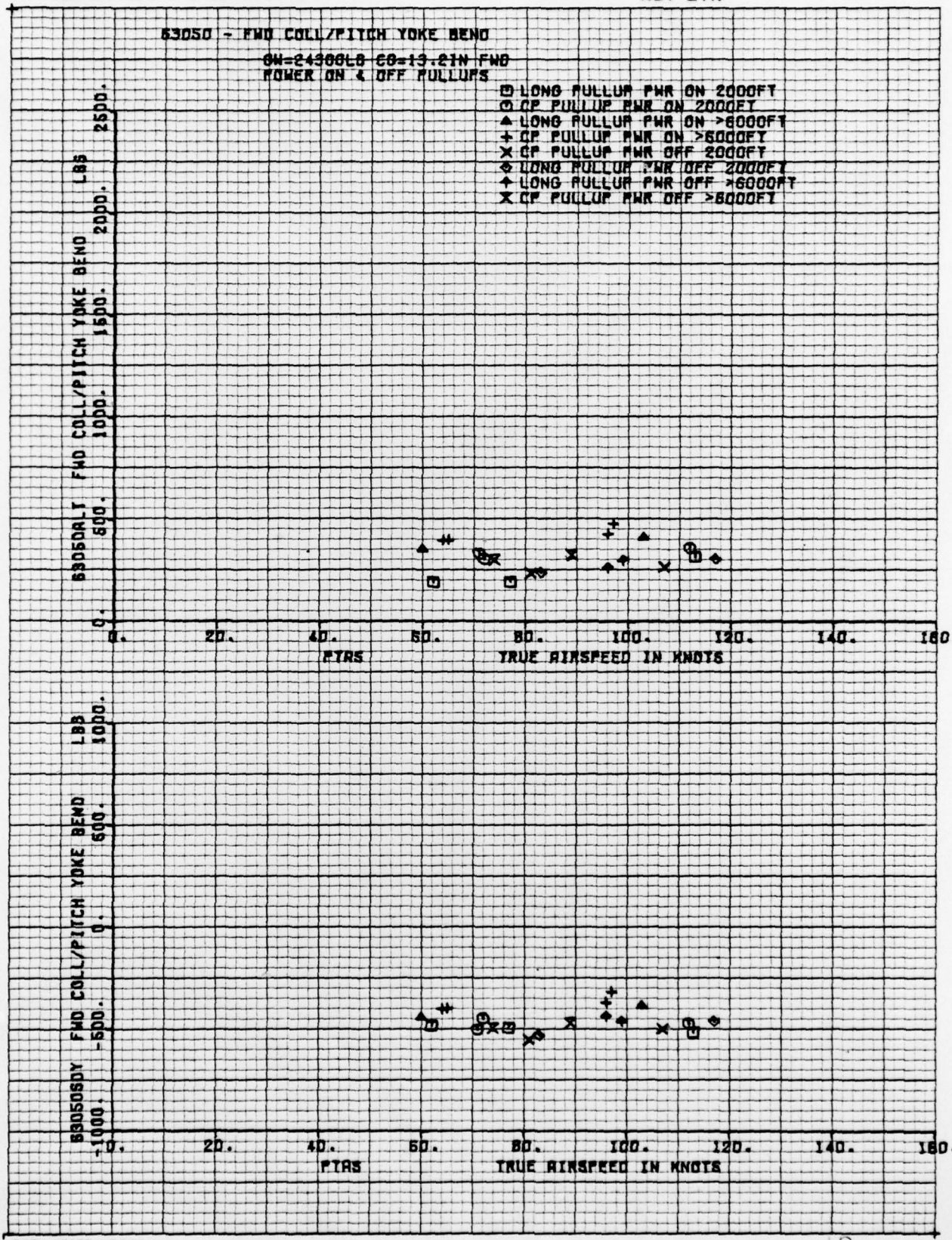

63050 - FWD COLL/PITCH YOKE BEND
GW=200000LB CG=9.7IN AFT 264RPM
CONTROL REVERSALS POWER ON
LAT CONTROL REV 2000FT
LNG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV 6000FT
LNG CONTROL REV 6000FT
DIR CONTROL REV 6000FT
LAT CONTROL REV >6000FT
LNG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PIAS
TRUE AIRSPEED IN KNOTS

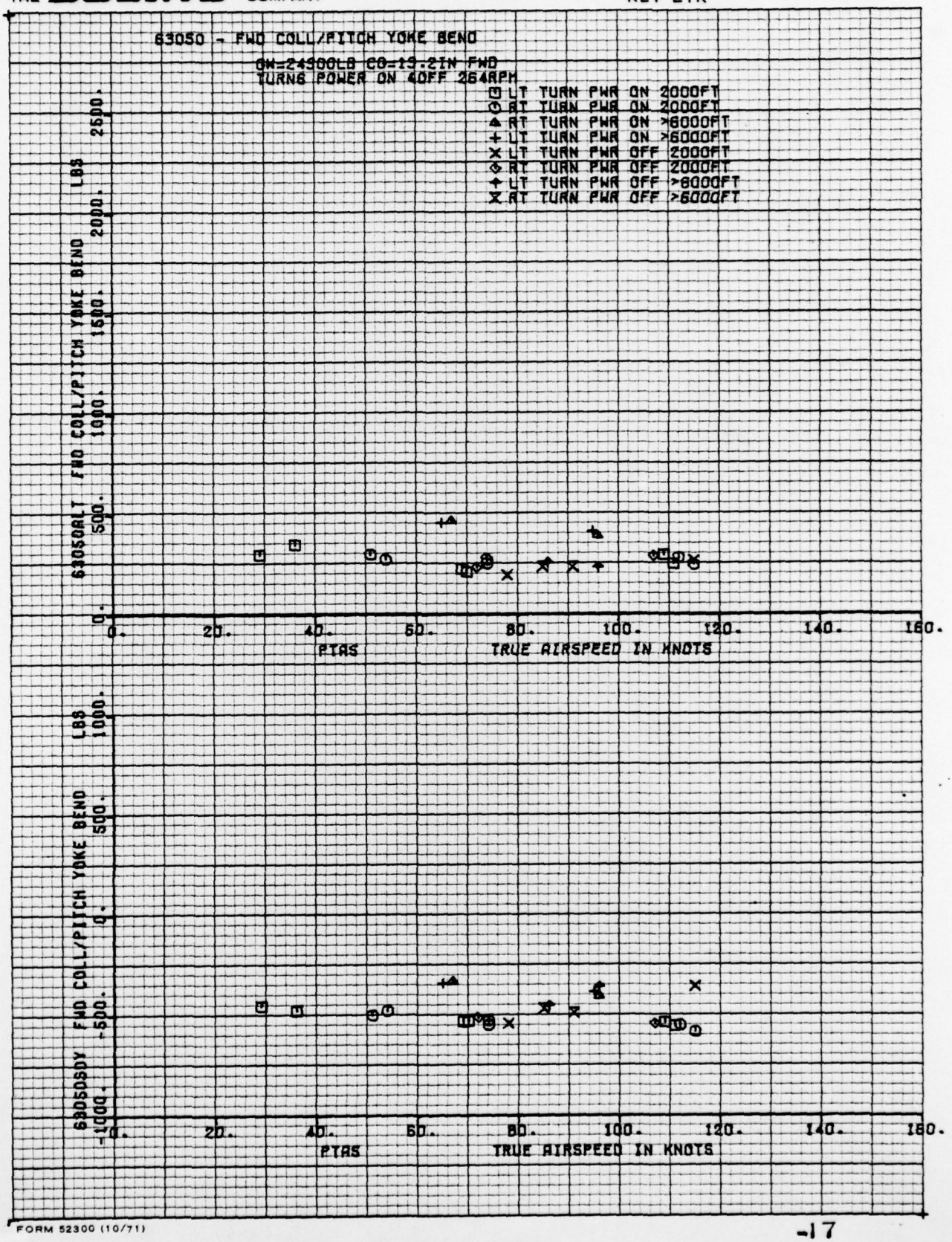

63050 - FWD COLL/PITCH YOKE BEND
GW=208000LB CG=9.7IN AFT 264RPM
LAT CONTROL REV PWR OFF 6000FT
LNG CONTROL REV PWR OFF 6000FT
DIR CONTROL REV PWR OFF 6000FT
LAT CONTROL REV PWR OFF >6000FT
LNG CONTROL REV PWR OFF >6000FT
DIR CONTROL REV PWR OFF >6000FT
SPIRAL DESCENT 6000FT
FLARE TO HOVER
BBOSOALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS TRUE AIRSPEED IN KNOTS
BBOSOBDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KTAS TRUE AIRSPEED IN KNOTS

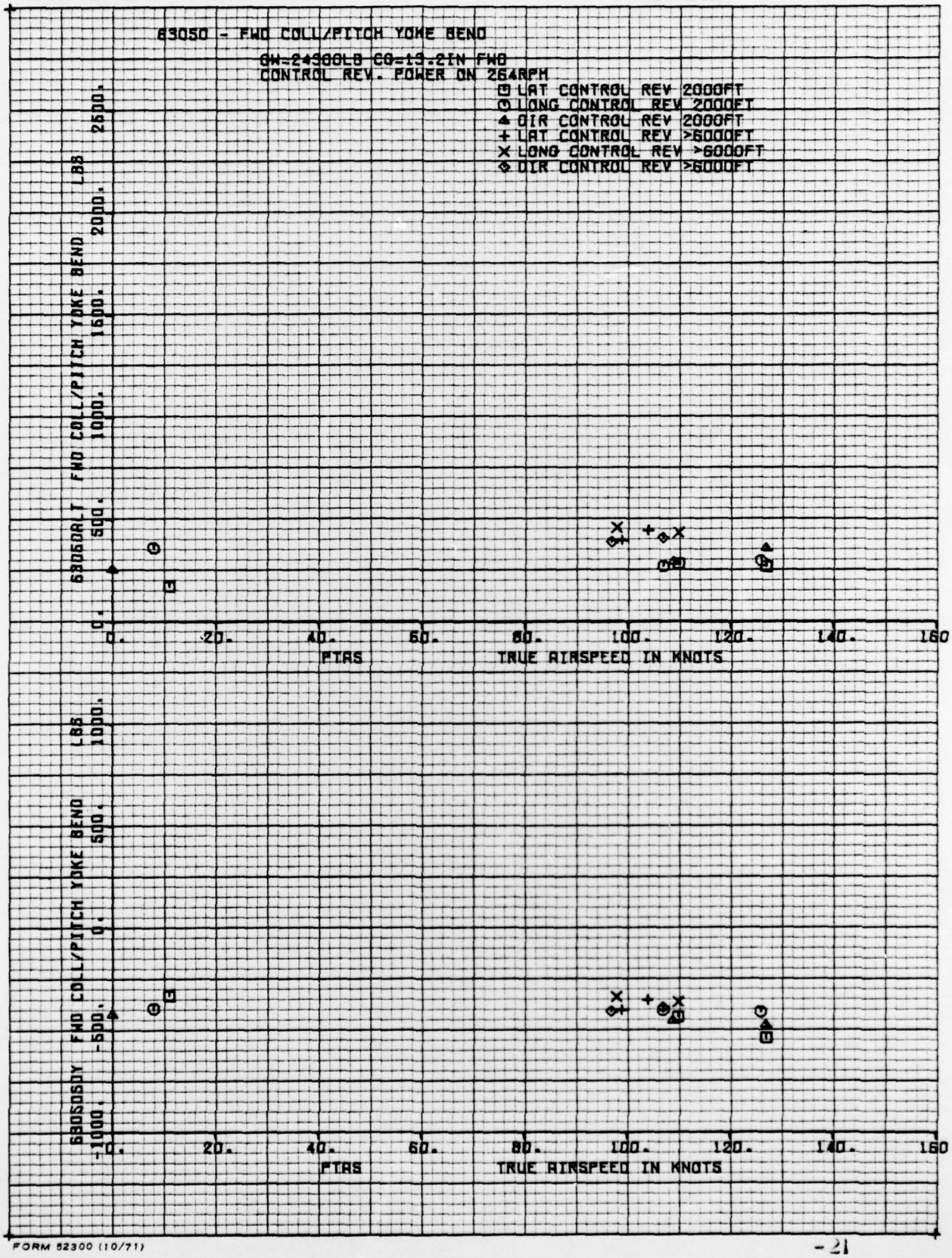

63050 - FWD COLL/PITCH YOKE BEND
GW=20800LB CG=9.7IN AFT 264RPM
A/R STEADY 6000FT
A/R STEADY >6000FT
PPD 6000FT
PPD >6000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
TRUE AIRSPEED IN KNOTS

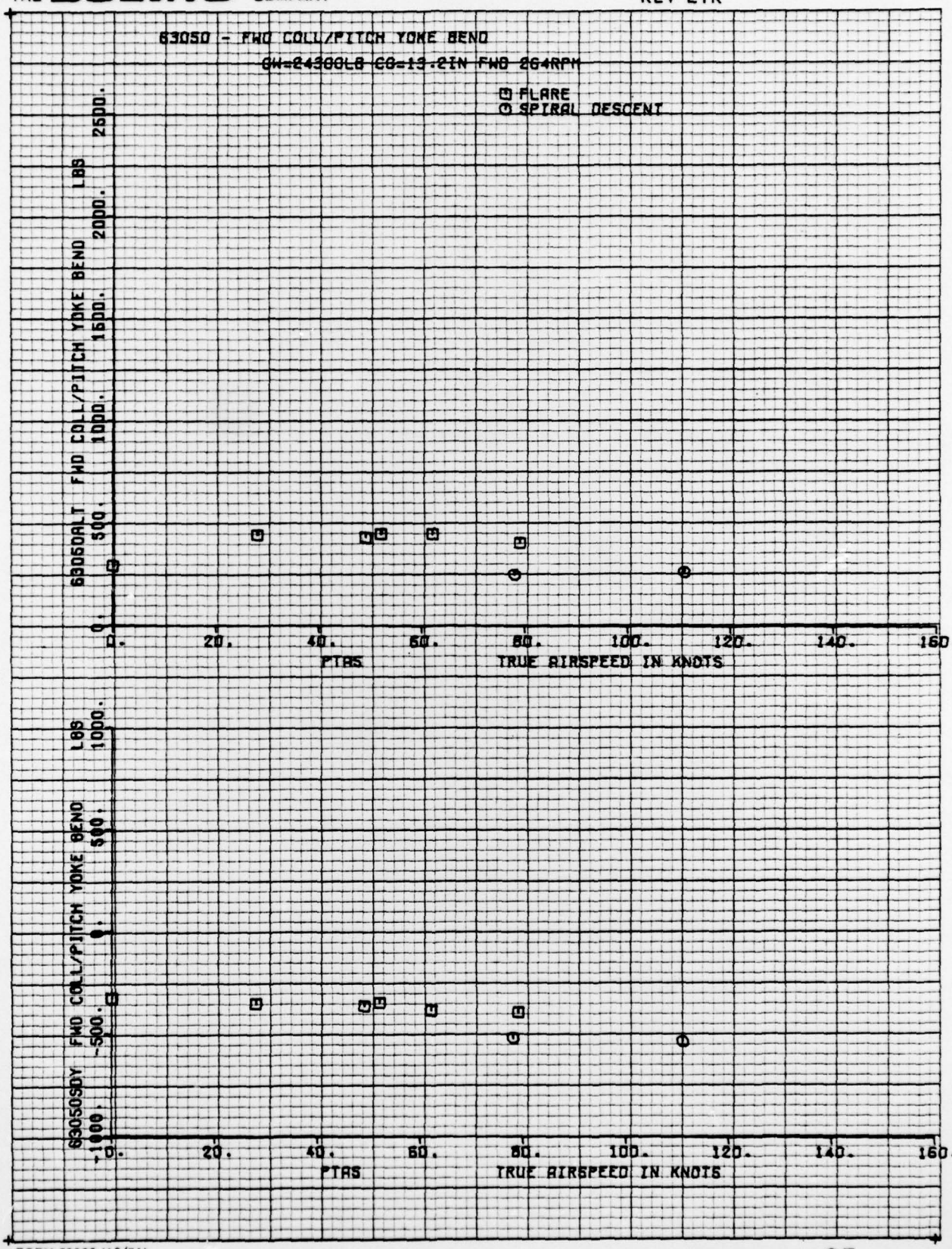

63050 - FWD COLL/PITCH YOKE BEND
GW=24300LB CG=13.21N FWD
HD=2000FT RPM=264
FLT 117 LEVEL FLT
FLT 119 LEVEL FLT
FLT 121 LEVEL FLT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

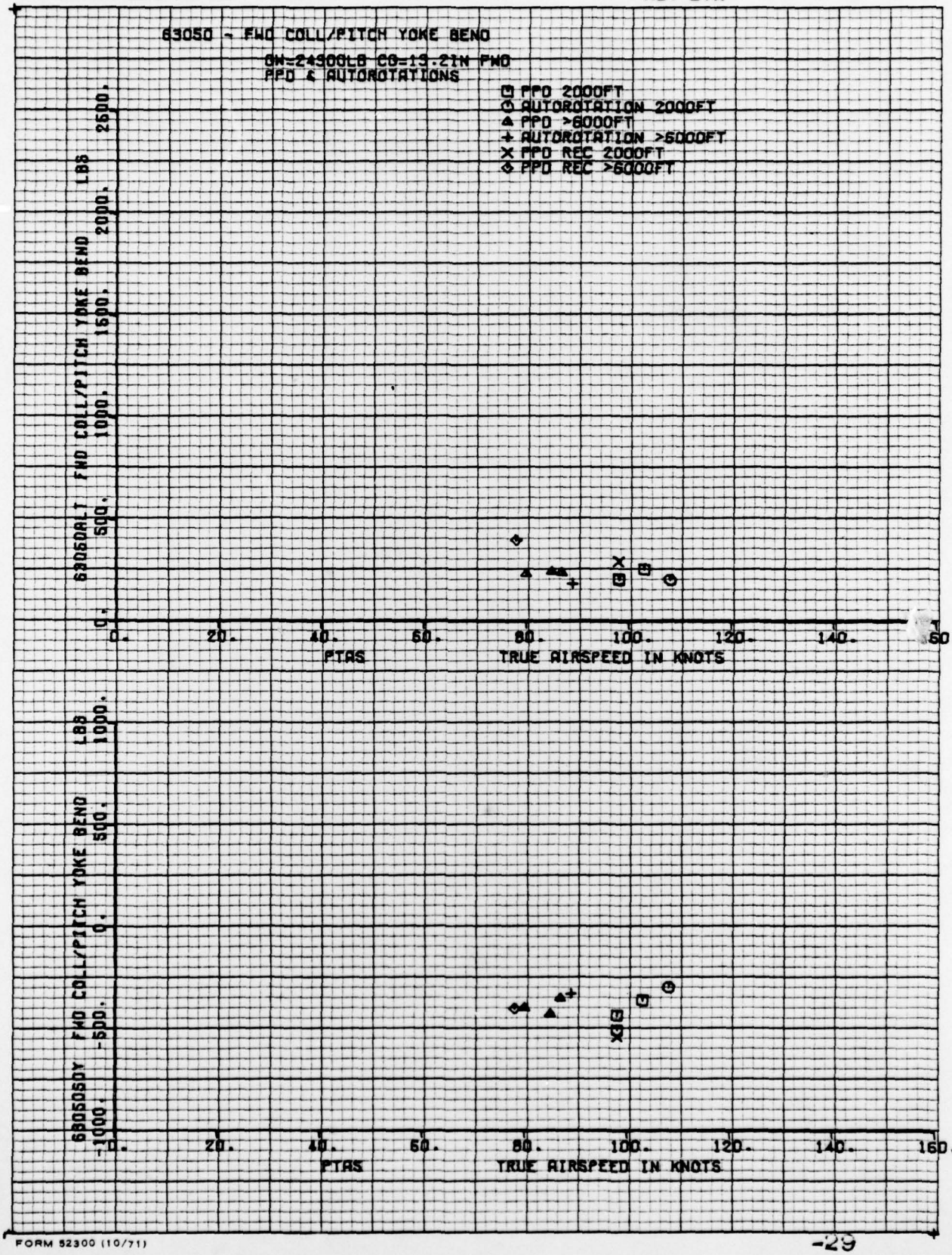

63050 - FWD COLL/PITCH YOKE BEND
GW=243000LB CG=13.2IN FWD
HD=>6000FT RPM=264
FLT 121 LEVEL FLT
63050A1 FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
63050B1 FWD COLL/PITCH YOKE BEND LBS
1000.
600.
0.
-600.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS

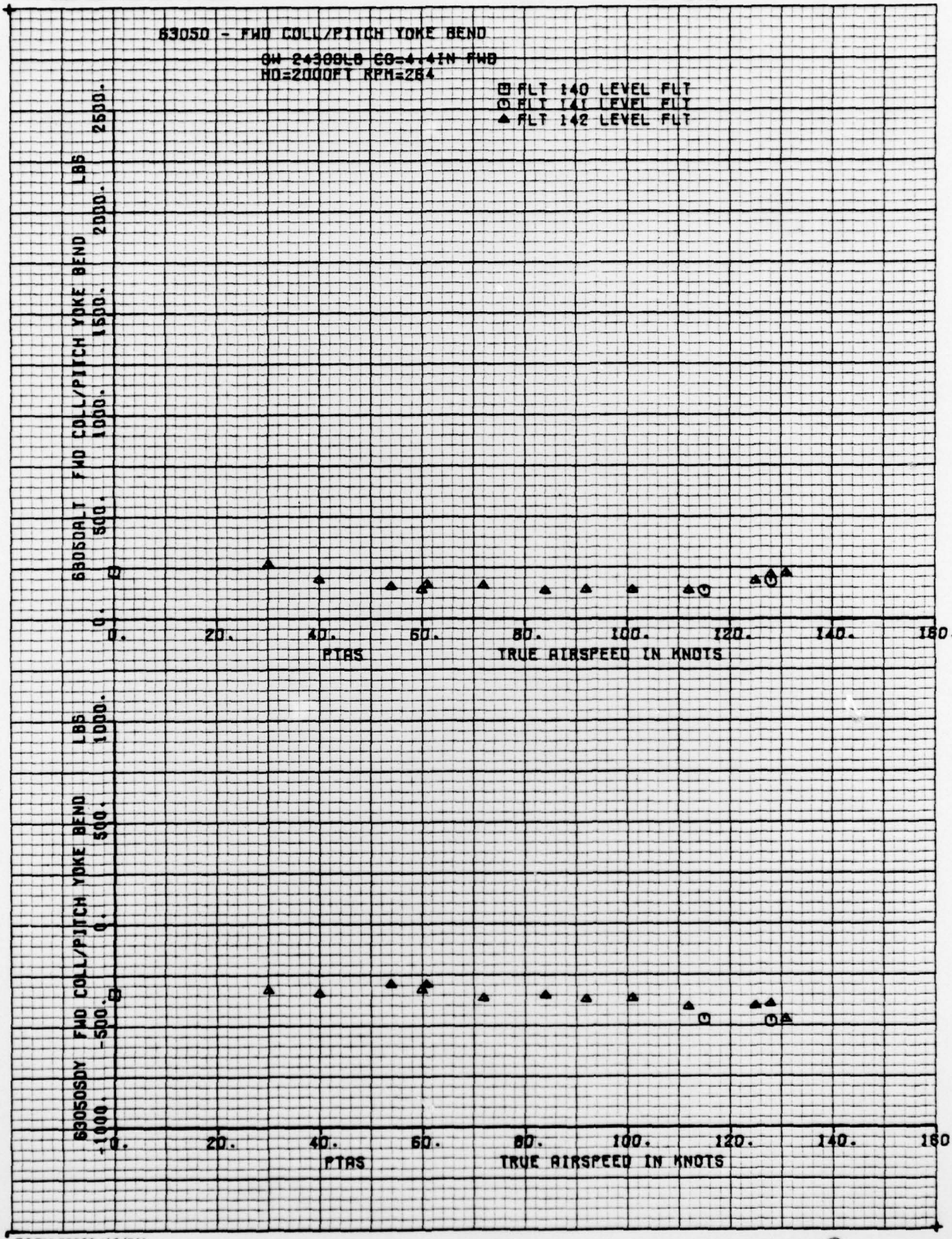

63050 - FWD COLL/PITCH YOKE BEND
GW=243866LB CG=13.21N FWD
POWER ON & OFF PULLUPS
LONG PULLUP PWR ON 2000FT
CP PULLUP PWR ON 2000FT
LONG PULLUP PWR ON >6000FT
CP PULLUP PWR ON >6000FT
CP PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF 2000FT
LONG PULLUP PWR OFF >6000FT
CP PULLUP PWR OFF >6000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
600.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
600.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS

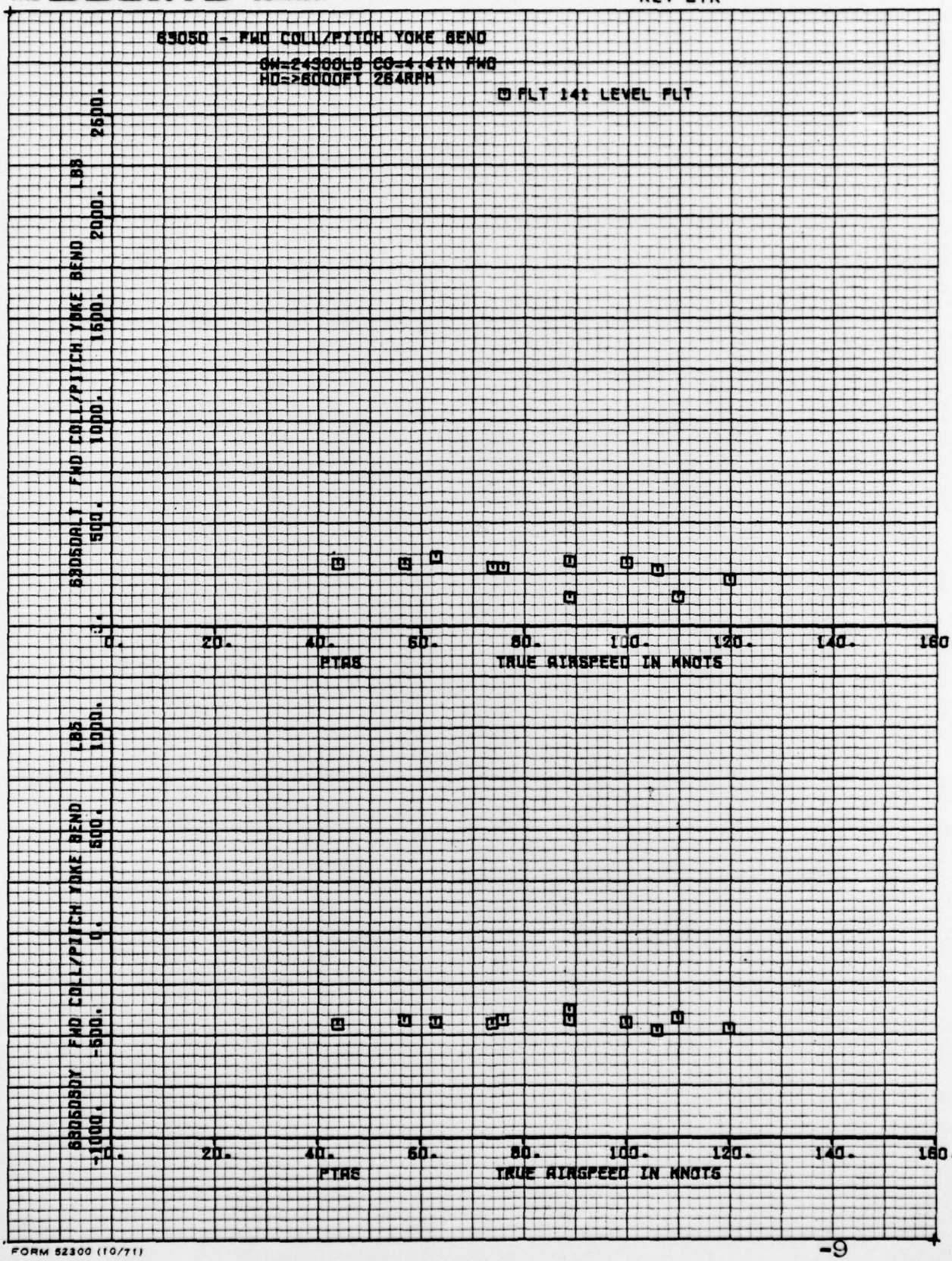

63050 - FWD COLL/PITCH YOKE BEND
GW=24500LB CG=19.2IN FWD
TURNS POWER ON 4OFF 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
RT TURN PWR ON >6000FT
LT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
LT TURN PWR OFF >6000FT
RT TURN PWR OFF >6000FT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
KIAS
TRUE AIRSPEED IN KNOTS


83050 - FWD COLL/PITCH YOKE BEND
GW=24300LB CG=13.2IN FWD
CONTROL REV. POWER ON 264RPM
LAT CONTROL REV 2000FT
LONG CONTROL REV 2000FT
DIR CONTROL REV 2000FT
LAT CONTROL REV >6000FT
LONG CONTROL REV >6000FT
DIR CONTROL REV >6000FT
83060RLT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS TRUE AIRSPEED IN KNOTS
83050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
KTAS TRUE AIRSPEED IN KNOTS

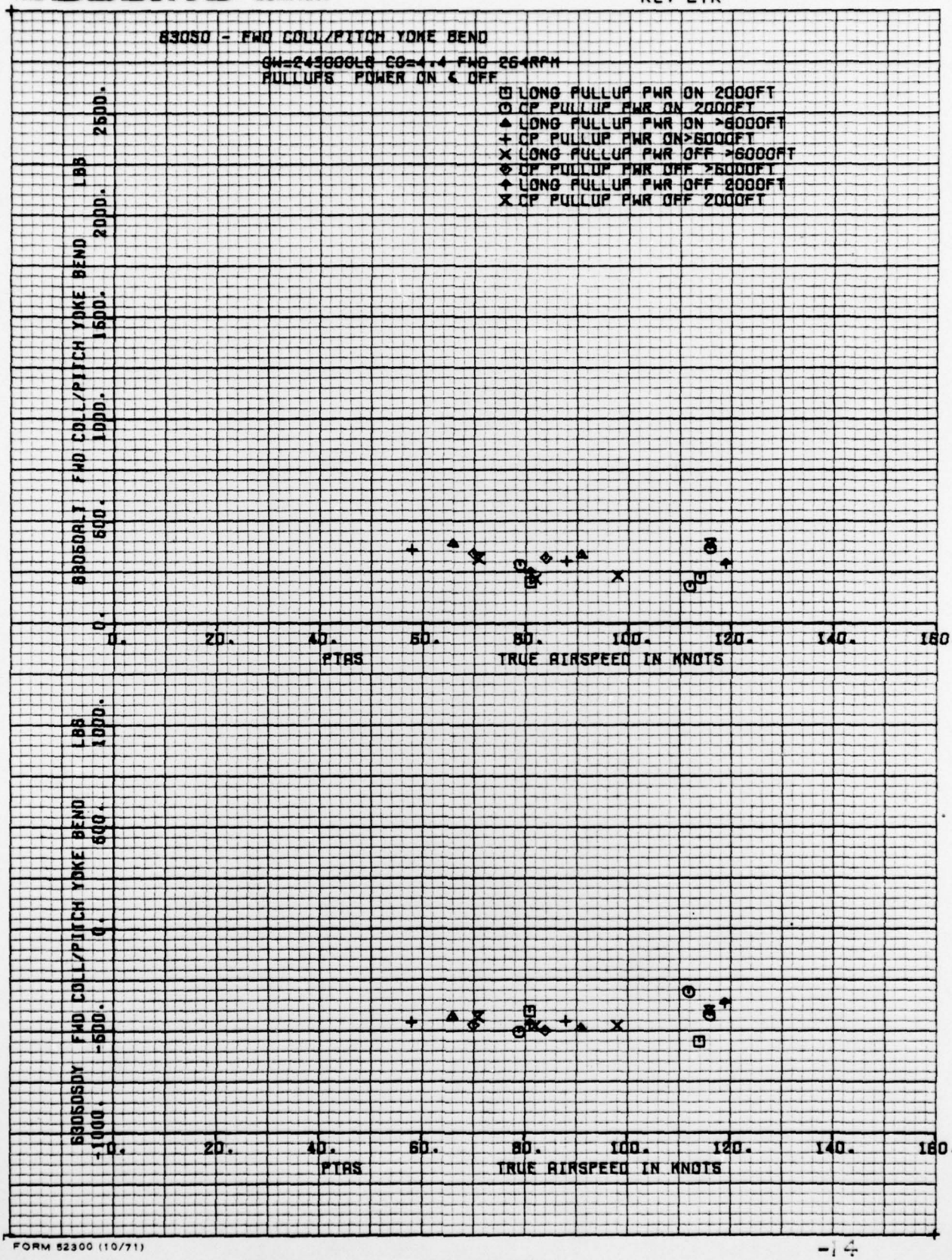

63050 - FWD COLL/PITCH YOKE BEND
GW=24300LB CG=13.2IN FWD 264RPM
FLARE
SPIRAL DESCENT
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


63050 - FWD COLL/PITCH YOKE BEND
GW=24300LB CG=13.21N FWD
PPD & AUTOROTATIONS
PPD 2000FT
AUTOROTATION 2000FT
PPD >6000FT
AUTOROTATION >6000FT
PPD REC 2000FT
PPD REC >6000FT
63060ALT FWD COLL/PITCH YOKE BEND LBS
0.
500.
1000.
1500.
2000.
2500.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
63050DY FWD COLL/PITCH YOKE BEND LBS
-1000.
-500.
0.
500.
1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


63050 - FWD COLL/PITCH YOKE BEND
GW 24300LB CG=4.4IN FWD
HD=2000FT RPM=264
FLT 140 LEVEL FLT
FLT 141 LEVEL FLT
FLT 142 LEVEL FLT
6B05OALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
+1000.
0.
-500.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS

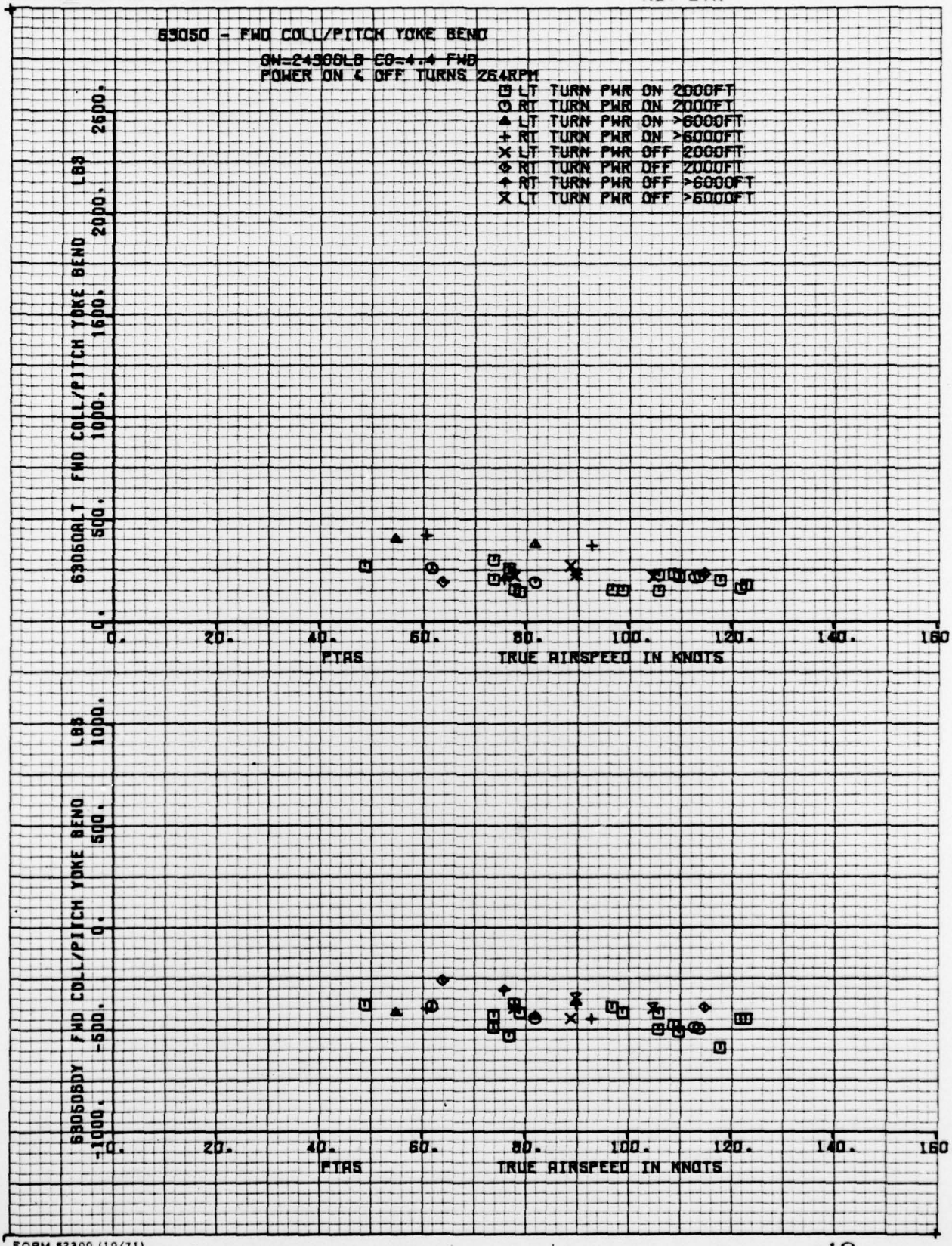


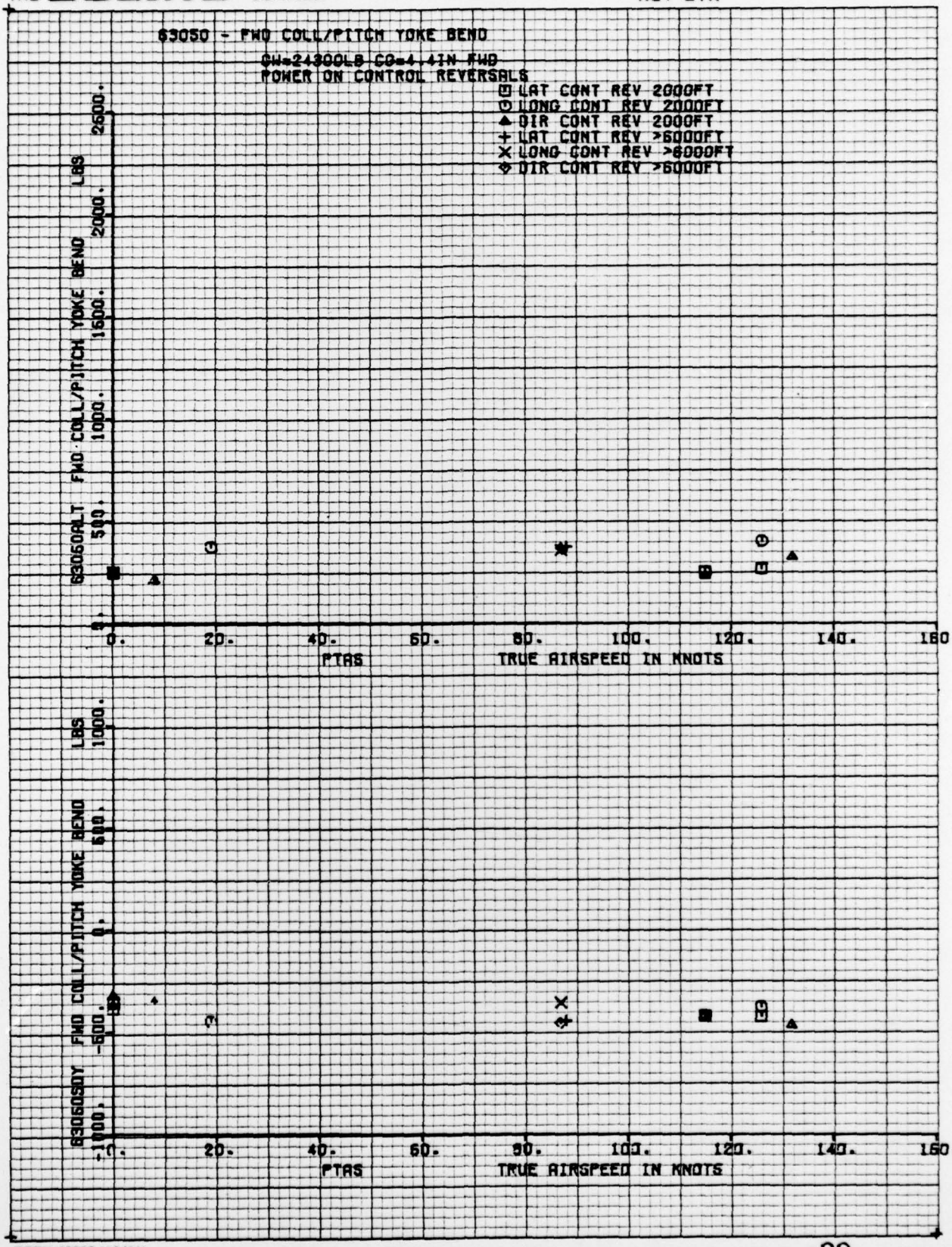
FORM 52300 (10/71)

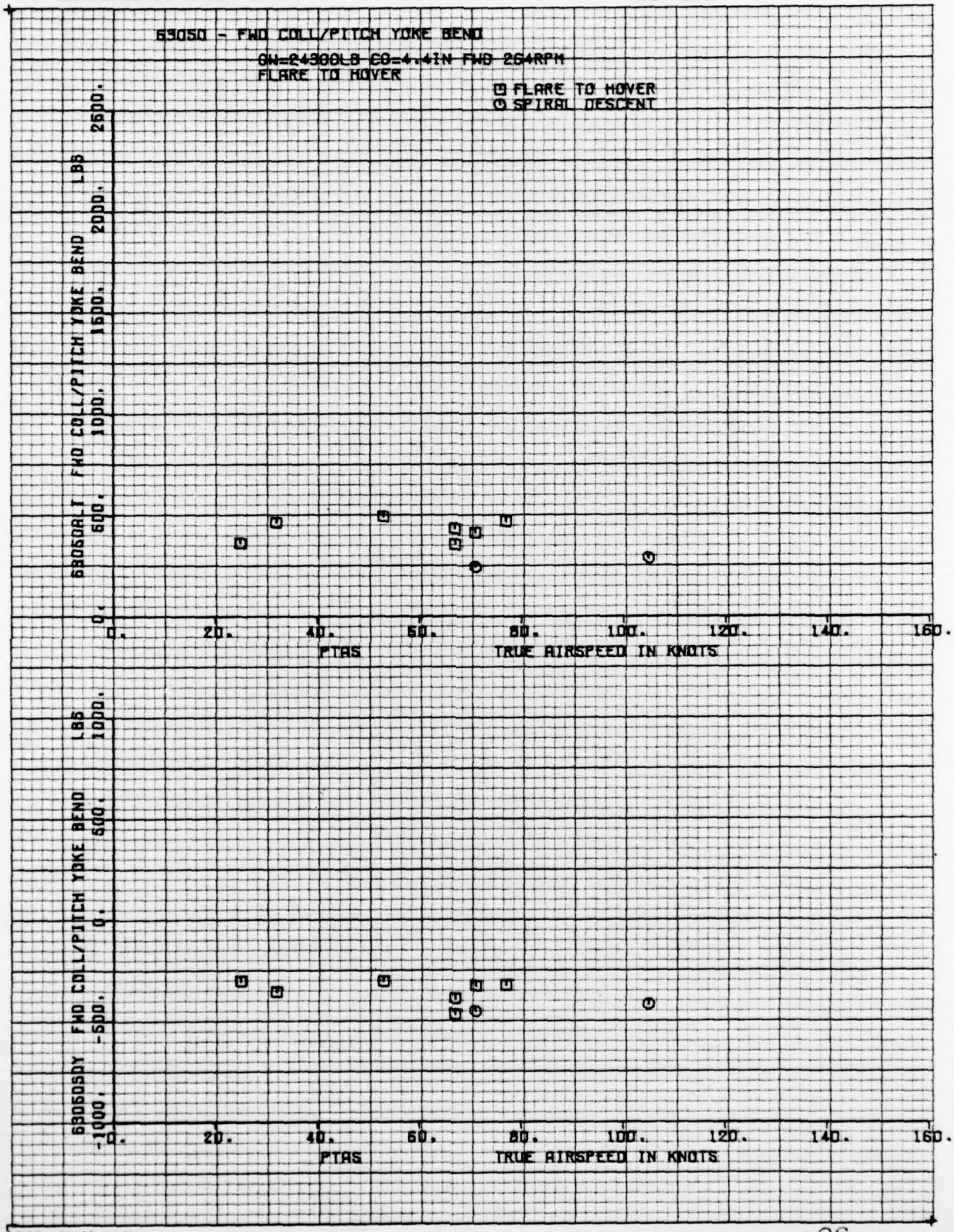


FORM 52300 (10/71)

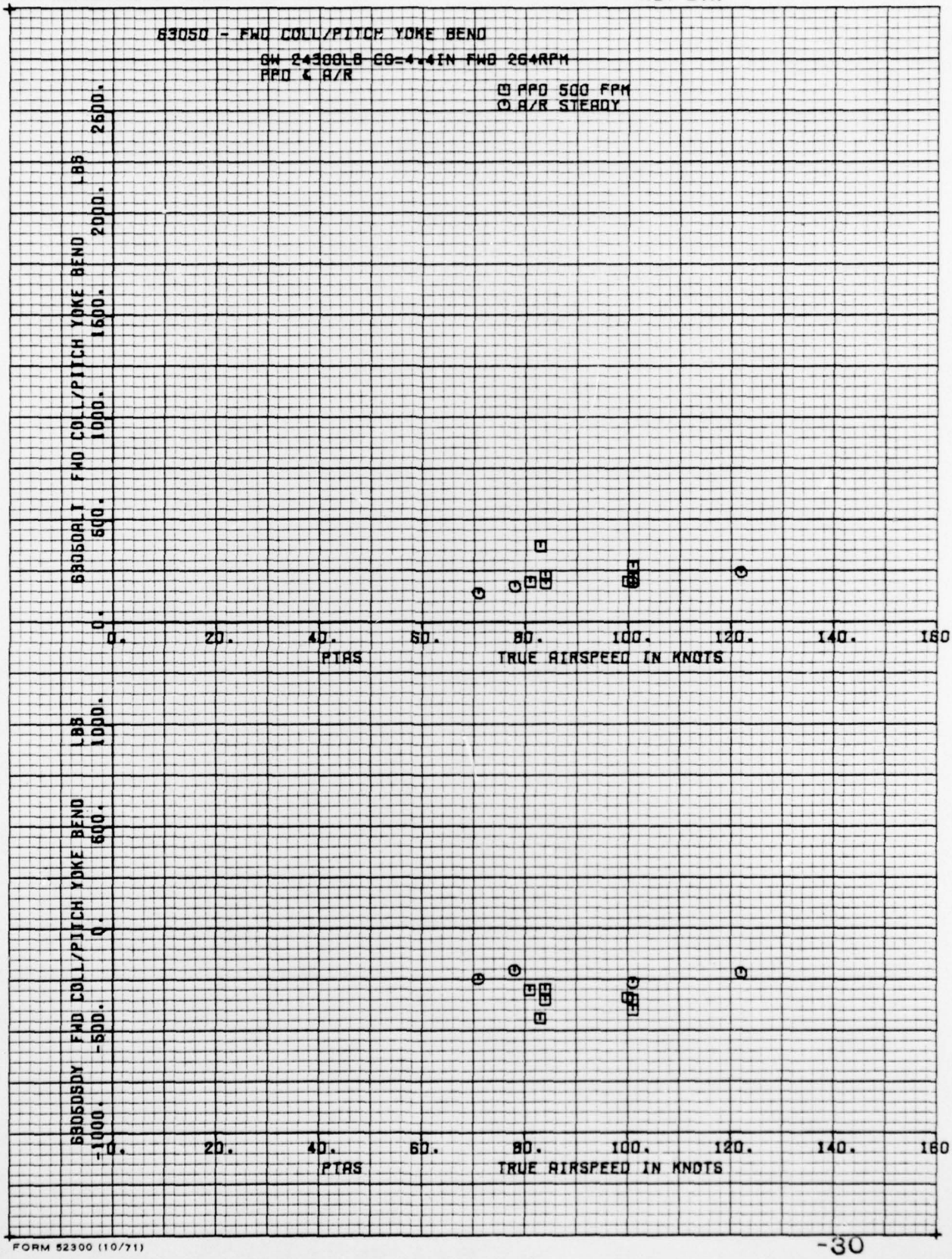
SHEET 352


63050 - FWD COLL/PITCH YOKE BEND
GW=24300LB CG=4.4 FWD
POWER ON & OFF TURNS 264RPM
LT TURN PWR ON 2000FT
RT TURN PWR ON 2000FT
LT TURN PWR ON >6000FT
RT TURN PWR ON >6000FT
LT TURN PWR OFF 2000FT
RT TURN PWR OFF 2000FT
RT TURN PWR OFF >6000FT
LT TURN PWR OFF >6000FT
63060ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1500.
1000.
500.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS
63060BDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS TRUE AIRSPEED IN KNOTS

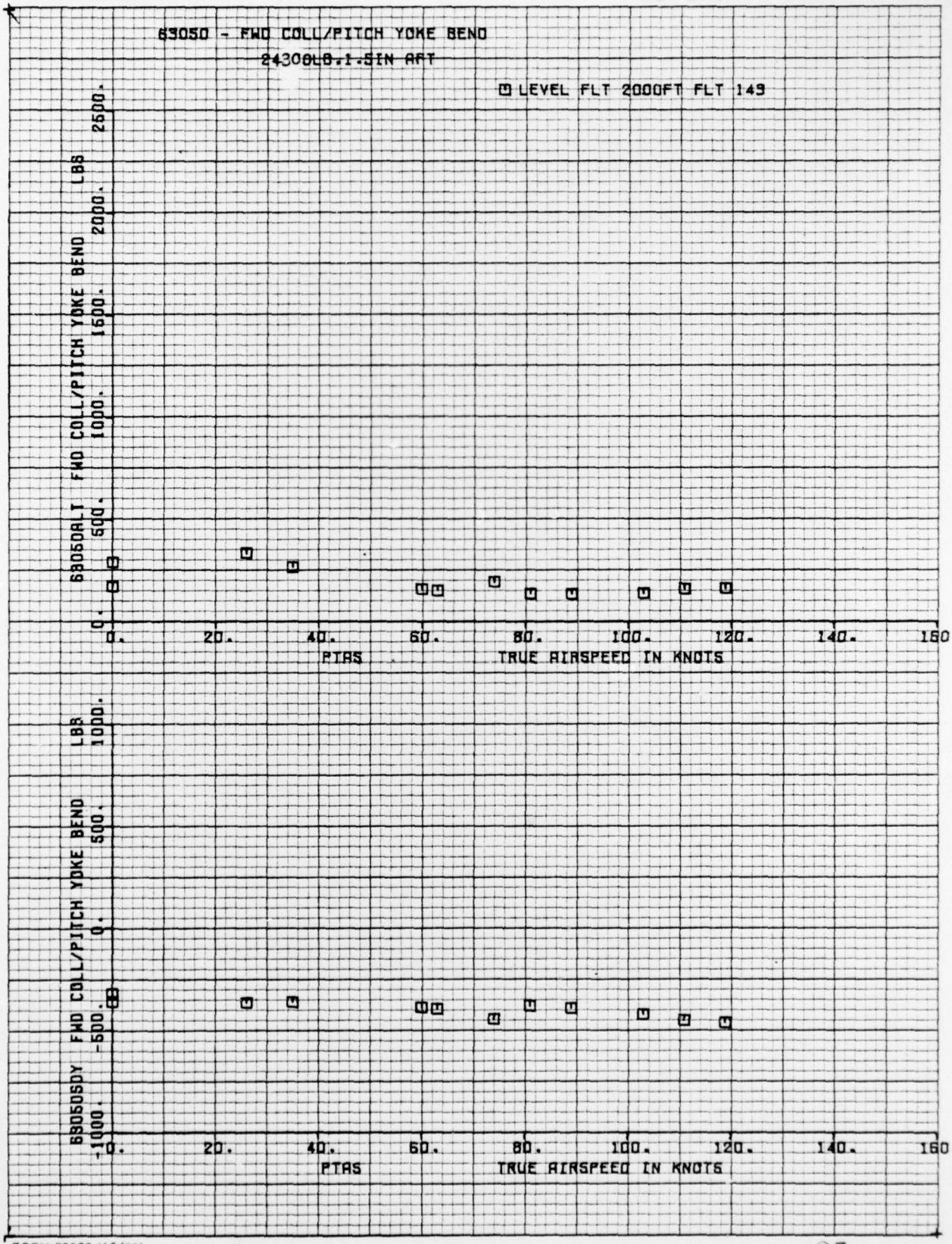

63050 - FWD COLL/PITCH YOKE BEND
GW=243001B CG=4.4IN FWD
POWER ON CONTROL REVERSALS
LAT CONT REV 2000FT
LONG CONT REV 2000FT
DIR CONT REV 2000FT
LAT CONT REV >6000FT
LONG CONT REV >6000FT
DIR CONT REV >6000FT
63060ALT FWD COLL/PITCH YOKE BEND LBS
2600.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS
63060SDY FWD COLL/PITCH YOKE BEND LBS
1000.
600.
0.
-600.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PTAS
TRUE AIRSPEED IN KNOTS


63050 - FWD COLL/PITCH YOKE BEND
GW=24300LB CG=4.41N FWD 264RPM
FLARE TO HOVER
FLARE TO HOVER
SPIRAL DESCENT
6805DALT FWD COLL/PITCH YOKE BEND LBS
2600.
2000.
1600.
1000.
600.
0.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS
6805DSDY FWD COLL/PITCH YOKE BEND LBS
1000.
600.
0.
-500.
-1000.
0. 20. 40. 60. 80. 100. 120. 140. 160.
PTAS
TRUE AIRSPEED IN KNOTS

THE BOEING COMPANY



FORM 52300 (10/71)


63050 - FWD COLL/PITCH YOKE BEND
2430 ~~GLO.1.5~~ IN AFT
LEVEL FLT 2000FT FLT 149
63050ALT FWD COLL/PITCH YOKE BEND LBS
2500.
2000.
1600.
1000.
500.
0.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS
63050SDY FWD COLL/PITCH YOKE BEND LBS
1000.
500.
0.
-500.
-1000.
0.
20.
40.
60.
80.
100.
120.
140.
160.
PIAS
TRUE AIRSPEED IN KNOTS